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REPORTS OF THE NATURALIST DIVISION

YELLOWSTONE NATIONAL PARK

VOL. II

1933 - 1936, Inc.

Monthly Reports, arranged chronologically,
for the years 1933, 1934, 1935 and 1936

Annual Report for year 1933

Summary Report for period October 1, 1933,
to June 30, 1934
Summary Report for period July 1, 1934,
to June 30, 1935
Report on Educational Activities for
period October 1, 1934, to Sept. 30, 1935
Summary Report for period July 1, 1935,
to June 30, 1936.

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DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

Naturalist

REPORT OF THE EDUCATIONAL DEPARTMENT

JANUARY, 1933

I. CURRENT OPERATIONS

A. Public Contact

Visitors: Dr. C.H. Carpenter of Casper, Wyoming, and Mr. Kenneth Roahen of the Biological Survey, came into the park near the end of the month to take a ski trip out in the park and obtain winter pictures and information.

Winter Lectures: Park Naturalist Bauer spent the first two weeks of the month lecturing and interviewing applicants for ranger-naturalist positions. Lectures were given to the Lions' Club at Boulder, Colorado, the Baptist Church, the Boy Scouts, the Geology Club at the University and to the Sigma Xi society in Laramie, Wyoming.

Mr. Joffe gave a lecture to the American Legion of Livingston, Montana, showing motion pictures.

II. PERMANENT PROJECTS

A. Administrative

The Park Naturalist interviewed the following men while in Colorado and Wyoming on educational matters and on specific problems connected with the Educational Department in Yellowstone.

Prof. Junius Henderson, Univ. of Colorado Museum
Prof. R.D. George, Geology Dept., University of Colorado
Prof. R.D. Crawford " " " "
Prof. Longyear, Forestry Dept. Colorado Agricultural College
Prof. Roy D. Coffin, Geology Dept. " " "
Prof. Aven Nelson, Botany Dept., University of Wyoming
Prof. John Scott, Zoology Dept., " "
Prof. S.H. Knight, Geology Dept., " "

Plans for a library room were made and library cataloging is to be carried to completion as soon as possible. Museum plans and accessioning were discussed on many occasions by the naturalist staff. The work of accessioning museum items has been carried on during the entire month by Junior Park Naturalist Baggley and for a major part of the month by Assistant Park Naturalist Crowe. Parts of several days were

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

REPORT OF THE EDUCATIONAL DEPARTMENT

JANUARY, 1938

I. CURRENT OPERATIONS

A. Public Contact

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Winter Lectures: Park Naturalist Baker spent the first two weeks of the month lecturing and interviewing applicants for temporary naturalist positions. Lectures were given to the Lions' Club at Boulder, Colorado, the Baptist Church, the Boy Scouts, the Geology Club at the University and to the Sigma Xi society in Laramie, Wyoming.

Mr. Joffe gave a lecture to the American Legion of Livingston, Montana, showing motion pictures.

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Prof. John Scott, Zoology Dept., " "
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Plans for a library room were made and library cataloging is to be carried to completion as soon as possible. Museum plans and accessioning were discussed on many occasions by the naturalist staff. The work of accessioning museum items has been carried on during the entire month by Junior Park Naturalist Bagley and for a major part of the month by Assistant Park Naturalist Crowe. Parts of several days were

spent by Mr. Crowe on Hot Spring observations. The Assistant Park Naturalist also sent out a number of copies of the information booklet to schools and libraries and worked on lettering of library shelves and preparing storerooms for accessioning and books.

The staff also spent some time on correspondence and numerous conferences were held with Acting Superintendent Edwards

On January 26 a meeting of department heads and others approved the formation of the Yellowstone Library and Museum Association and voted to accept the rules and regulations. Officers and directors were elected. The Association is to sponsor the Yellowstone library and museums and handle the funds obtained from the sale of publications and from other sources. Much time is required to handle requests for negatives, pictures or information coming from the superintendent's office of from publishers and Dr. Russell and Mr. Yeager.

B. Nature Notes

Replies received from the persons on our Nature Notes mailing list indicate that out of nearly 700 only 169 would pay one dollar a year for it. There were 301 replies and of these 132 replied they would not pay one dollar a year. Of these, 70% said they could not afford it, 29% gave no explanation and only two persons stated they didn't like the publication. A large number of the replies were very complimentary to Nature Notes.

A conference was held with Mr. Edwards, Mr. Joffe, Mr. Crowe and Dr. Bauer present and after much discussion it was decided unanimously to continue Nature Notes as a free publication and form a Yellowstone Library and Museum Association to care for the funds derived from the sale of books, maps and other publications.

Nature Notes were not published this month but the January-February issue will be mailed about the middle of February.

C. Library

Books in circulation 10. Books and pamphlets received during month 25. Magazines received during month 14.

Plans for a library room in the basement of the museum were made by Mr. Edwards and Dr. Bauer. Work will begin at once.

Mr. C. Henry Smith, Librarian of the University of Colorado, offered to assign classification numbers to all of our library books if we would supply him with the list, including title, author and volume numbers. The offer was accepted and the list furnished, hence we expect to complete the library cataloging this spring.

D. Museum Accessions

Museum accessioning, including the preparation and typing of new cards and the completing and correcting of old cards has been carried on throughout the month. Document files are surprisingly complete and much information has been added to old cards. The Junior Park Naturalist spent nearly all of the month on these museum accession records. Stenographic help was supplied for 18 days. Most of this time was spent on the accession records.

E. Equipment

Two dozen nine-inch and two dozen five-inch bookends were received during January.

F. Photographs

Negatives in circulation 161. Prints checked and pasted in albums 300. Printing and enlarging for publicity in government dark room 1½ days.

Slides in circulation 96. Slides repaired, including new glass, mats, labels, and shellacing edges 100. Slides shellaced only, 96.

G. Publicity Clippings

Sorting of clippings 6 days. Mimeographing 4 days.

L. Thermal Activity

Hymen Spring: Shows a stronger flow of water covering the entire northeast slope below the spring. Sulphur bacteria are abundant over fully one-half of this area. The smaller opening at the source is now closed, and the larger terrace on the west is filled with hot water, but is not overflowing.

Palette Spring: Flow the same and the mound about the spring is increasing in height and extent. Two small basins on the east have been reclaimed and are building up. Three large terraces are forming on the east portion of the slope and a large one about the center. White travertine is in evidence on the fronts of these new terraces without algae. A great deal of sulphur bacteria in evidence.

Mound and Minerva are the same.

Cleopatra has decreased.

Main: Is overflowing slightly along its north slope.

Jupiter and Blue Springs: Are putting out about the same amount of water as in December. There are not many algae in evidence and the colors are dark and dingy.

Angel Terrace shows no change from last month.

On January 17, 1933, Rangers Jay and Elliott observed an eruption of Twin Geysers at West Thumb. They were attracted by the noise and rushed out in time to see both geysers erupting to a height of at least 30 feet. The eruption, a violent one in which mud, stones and large sticks were thrown out, lasted only about four minutes.

On January 31, 1933, Chief Ranger Baggley observed Emerald Spring. The spring was full and overflowing, but a large steam vent has opened about two feet from the spring and is roaring in competition with the once famous Black Growler.

M. Personnel

The entire Educational staff was on duty during the month.

Respectfully submitted

C. Max Bauer
Park Naturalist

CC Dr. Bumpus
Mr. Hall
Dr. Russell
Director

O. Max Bauer
Park Naturalist

CC Dr. [illegible]
Dr. [illegible]
Dr. [illegible]
Director

Park Naturalist

March 2, 1933

REPORT OF THE NATURALIST [illegible]

February, 1933

I. CURRENT OPERATIONS

A. Public Contact

Visitors: Dr. A.H. Carter of the Government hospital, Fairbanks, Alaska, made a visit on the 22nd.

Winter Lectures: No lectures were given by the regular staff in February.

Letters from several ranger-naturalists, including Mr. Peery, Mr. Eberhardsley, Mr. Bush and Mr. Lystrup, show that they have each given several lectures during the month.

II. PERMANENT PROJECTS

A. Administrative

Official correspondence and making of plans for library housing, library cataloging and museum specimen cataloging occupied much time during the month. Numerous conferences with Acting Superintendent Edwards were held.

The Park Naturalist, in company with Assistant Chief Ranger LaBone, Acting Superintendent Edwards and Master Mechanic [illegible], spent the last five days of February on a dial trip to the Mount Creek Hay Ranch, where 99 elk were tagged and blood samples taken.

The selection of temporary ranger-naturalists has been held up pending a ruling from the Civil Service Commission. Over 70 letters of application have been received.

B. Nature Notes

The January-February issue of Nature Notes was edited the first week of February and stencils were cut. However, due to bad weather Mrs. Arnold did not receive the stencils for illustrating until

February 13 and they were not returned for [illegible] until February 25. Hence they were mailed on the last day of the month.

In order to avoid these delays it is hoped some assistance can be given on the illustrating during the [illegible] months. [illegible] copies were distributed.

C. Library

Classification numbers are being assigned by the University of Colorado Librarian.

The library room in the basement of the Mammoth Museum has been excavated

Books in circulation 13; books and pamphlets received 36; magazines received and filed 19.

D. Museum Accessions

Accessions for February: On February 6 an old photograph (self) and photostat copy of letter of recommendation received from Thomas Coyne of Kansas City. On February 15 four crates of mounted mammals were received from Mr. Clement. One tanned buffalo hide was received on February 28.

Museum accessioning went forward. Junior Park Naturalist [illegible] spent practically the whole month on this work and assistant Park Naturalist Crowe gave nine days to it. The Park Naturalist has also given considerable time and thought to this work. A complete and accurate record is desired and this requires many [illegible] and additions on cards prepared previously. Stenographic help was supplied from the superintendent's office for 10 days.

E. Equipment

On February 10 two Zeiss telescopes (Asinaba, trade name) without coin mechanism were received in trade for one large binocular telescope purchased in 1929. It is planned to use the telescopes at Fishing Bridge museum and on top of Mt. Washburn. They are weather-proof, fool-proof and theft-proof.

F. Photographs

Negatives in circulation 175, slides received labeled and catalogued 25. These last were received from Dr. Oestler. Some are replacements and some are new.

G. Publicity Clippings

All clippings have been classified and pasted into scrap books. This work is now up-to-date. Alfred Mead worked [illegible] days on clippings and most of the month on mimeographing. He ran off 13,200 sheets in addition to Nature Notes which amounted to 7,000 pages.

I. Thermal Activity

Hymen Spring shows a decrease in flow on the lower terraces, but a slight increase on the upper terrace.

Paletta Spring has decreased in flow, but the travertine mound at the outlet has increased between three and four inches in height. The new basins on the east portion of the terraces are now empty. Dark green algae has covered some of the new deposits of travertine.

Minerva shows a very slight overflow to the north.

Mound is overflowing to the northwest and east.

Main Terrace shows seepage of water at intervals along its north slope.

Baby Spring - the flow has decreased to one quarter of that of last month. The new outbreak 80 feet to the east and 10 feet lower has greatly increased and is building a small terrace and mound at the outlet. Sulphur bacteria covers an area of [illegible] square feet.

(Cupid's Cave area.)

Blue Springs - all the basins are filled and overflowing to the north and south. Colors vary from dark green to pale blue.

Jupiter Spring is overflowing to the south.

Highland Terrace has ceased flowing. Two small warm pools in evidence on the top.

Glen Spring shows slight seepage.

A New Outbreak (small) was noticed between Glen and Angel.

Angel Spring - the entire flow is coming from the south outlet. The new terrace covered with sulphur bacteria is eight feet across and has a vertical height at the front of approximately five feet. Smaller terraces are forming half way down the slope.

Devils Kitchen shows no change.

Etrurian Cave - entrance nearly covered with ice.

Soda Spring - shows no change

Orange Spring - no change

Elephant Back - slight seepage.

M. Personnel

Park Naturalist Bauer on duty all month. Assistant Park Naturalist Crowe was on sick leave February 9 and 10 and on furlough the 14th and half day the 24th. Junior Park Naturalist Bagley was on sick leave February 8 and 9 and the 14th to 16th inclusive. Janitor Alfred Mead was on duty the entire month.

Respectfully submitted

D. Max Bauer

D. Max Bauer
Park Naturalist

CC Dr. Dumpus
Director
Dr. Russell & Dr. Hall
CMB/cw

April 7, 1933

REPORT OF THE NATURALIST DEPARTMENT

MARCH, 1933

I. CURRENT OPERATIONS

A. Public Contact

Visitors: Mr. Kenneth Loukon of the Biological survey spent several days in the park.

Winter lectures: Mr. Joffe, assistant to the superintendent gave 18 lectures in four days at Helena, Montana, to very enthusiastic audiences. Mr. Crowe, Assistant Park Naturalist, spent the last part of the month at Berkeley, California, and reports having given several lectures in the Bay region.

We also received numerous letters from our rangers-naturalists telling of winter lectures given. This month we wish to mention particularly those given by Mr. Kelly, Mr. Willis Smith and Mr. Kenneth Apsrter. Others were mentioned last month.

II. PERMANENT PROJECTS

A. Administrative

The Park Naturalist spent 10½ days on the work of museum accessioning and cataloging. Most of this time was spent on revising cards and adding information, the remainder on new accessions. A total of 3½ days were given to library housing plans; 2½ days on museum housing and office plans; 1½ days given to geologic study and the preparation of a map showing extent of glaciation; 4 days on official correspondence and routine; 4 days on conferences and general administration; one day inspecting hot springs.

The Assistant Park Naturalist spent several days on museum accessioning and cataloging and left on March 9 for California. From March 13 to 27 inclusive he worked on the Century of Progress exhibits assisting Mr. Ansel Hall. The last day of the month he spent on lecture work in California.

The Junior Park Naturalist spent 24 days on museum work. Nearly all of this time was spent on checking information and re-writing cards. Three days were spent on routine and general duties.

No progress was made in the selection of the temporary ranger-naturalists.

B. Nature Notes

Several items were received for Nature Notes. No other work was done on this project.

C. Library

Mr. C. Henry Smith, Librarian of the University of Colorado Museum, has been working on the classification of our books. He also presented our library with a new accession book marked for "The Yellowstone Park Library."

The work on the library room was at a standstill for three weeks, but during the last 10 days considerable progress was made. The stairway is cut and lathing is being done.

Books in circulation 2; books and pamphlets received 9; magazines received 15.

D. Museum Accessions

Only one new accession was received, two flint arrow heads from Mrs. M.L. Arnold.

Museum Work: This item has been discussed under Administration. In addition to the work done by the regular staff, stenographic help was supplied from the Superintendent's Office for two days. Miss Whitney has also given considerable time in looking up old records and documents. Forty two lots of material were accessioned.

E. Equipment

A pair of scales for weighing postal and express shipments was received, also two steel reading tables for the library and two aluminum boxes for visitors registers.

F. Photographs

Negatives in circulation 49. Labels were written for 166 prints. Slides in circulation 139.

G. Publicity Clippings

Clippings were completely posted last month. No additional work this month.

No progress was made in the selection of the temporary [illegible].

[illegible]

Several items [illegible]. No other work was done on this project.

[illegible]

Mr. [illegible], Librarian of the University of [illegible] Museum, has been working on the classification of our books. [illegible] "the [illegible] Library."

The work on the library room was at a standstill for three weeks, but during the last 10 days considerable progress was made. The stairway is cut and lathing is being done.

[illegible]

[illegible]

[illegible]

Museum Work: This item has been discussed under Administration. In addition to the work done by the regular staff, [illegible]. This [illegible] has also given considerable time in looking up old [illegible] and documents. Forty two lots of material were [illegible].

[illegible]

A [illegible] for weighing postal and express [illegible], [illegible] steel reading tables for the library and [illegible] visitors registers.

[illegible]

[illegible]

[illegible]

[illegible] completely posted last month. No additional [illegible].

L. Thermal Activity

Hymen Spring shows more activity on upper terrace and less below. On the south end of the walk below the spring the travertine has deposited several inches over the boards.

Palette Spring has increased during the month. Two small trees four feet high and two larger ones 12 to 15 feet high have been killed and the waters have completely enveloped the Devils Thumb.

Minerve and Mound show little change. Not much water.

Main Terrace contains a number of cracks and at several points small cave-ins have occurred.

Baby Spring shows some increase and has overflowed the road.

Blue Springs put out a large amount of water for several days, overflowing practically all of the southern part of the main terrace. However, on April first it subsided and on the evening of that date, only the principal pool contained any water.

Jupiter Spring shows no noticeable change.

Angel Spring is still quite active, most of the flow coming from the south end.

Devils Kitchen - No change

Stygian Cave - " "

Soda Spring - " "

Orange Spring - " "

White Elephant Back - No change

M. Personnel

Park Naturalist on duty all month. Assistant Park Naturalist on duty March one to five inclusive, on leave enroute to California March six to twelve inclusive, assisting Mr. Ansel Hall March 13 to 27 inclusive, on leave March 28 to 30 inclusive, on duty March 31. Junior Park Naturalist on duty all month. Alfred Reed, janitor, on leave entire month.

Respectfully submitted

C. Max Bauer
Park Naturalist

CC Dr. Dumpus
Director
Dr. Russell & Mr. Hall
CMB/cw

May 2, 1933

REPORT OF THE NATURALIST DEPARTMENT

APRIL, 1933

I. CURRENT OPERATIONS

A. Public Contact

Visitors: One of our former rangers, Mr. James McBride, now living near Jardine, Montana spent a day in Mammoth, telling about old times and giving information on museum accessions of considerable value.

Winter Lectures: Assistant Park Naturalist Crowe delivered a number of illustrated lectures to schools in the Bay region of California. Mr. Joffe while on vacation in Missouri gave a number of illustrated lectures with motion pictures in St. Joseph and Kansas City and nearby towns to clubs and schools.

Ranger Naturalists have also given many lectures free. Mr. David Condon may be especially mentioned in this connection as he has prepared a number of slides from his own negatives.

II. PERMANENT PROJECTS

A. Administrative.

The Park Naturalist spent 5 days on moving books, painting and cleaning up basement rooms for storage; 4 days on museum and library plans; 3 days on selection of Ranger Naturalists and plans for summer programs; 3½ days on official correspondence and memorandums; 1 day on plans for the Firehold Cascade shrine; 2 days in the Park on animal and geological observations; 3 days on furlough and one day on sick leave.

The Assistant Park Naturalist spent from April 1 to 17th inclusive in California and enroute to Yellowstone. From April 18 to the end of the month he has spent most of his time in moving museum cases and materials and preparing basement rooms for storage and moving books into sales publication room.

The Junior Park Naturalist nearly all of the month worked in the museum and on accessions. During this time 59 new accession records have been made. 3 days were spent on other clerical and stenographic work; 2 days on slides and photographs; 1½ on personnel; 1 day on moving office.

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The selection of the temporary ranger naturalists was made on April 17 and 18, and approved by the Superintendent.

B. Nature Notes

The March-April issue of Nature Notes was mimeographed and mailed. The subject of the issue is Fish and Birds, and it was mailed out to 660 addresses.

C. Library

No progress was made on the library except the receipt of a few books.

The work in the library room has almost reached completion. The concrete floor and plastered walls are finished. The steel shelving has arrived.

A new standard library accession record book was received as a gift from Mr. C. Henry Smith, Librarian of the University of Colorado. A set of new 14th edition Encyclopedia Britannica was received, having been purchased by the Yellowstone Library and Museum Association.

Books and Pamphlets received	16
Magazines received	16
Books in circulation	3

D. Museum Accessions

47 lots of material were accessioned. No new material was received.

The old office of the Naturalist Department has been made an extension to the Museum. This room will be for Earth Science exhibits as expressed in Yellowstone Park. The Naturalist office is now in the North wing of the Museum. The Mammoth Museum now has six departments arranged as follows: Animals, Birds and Plants in the front part or main room; History and Indians in the next room; and Earth Science in the rear room or east end of museum.

E. Equipment

4 waste containers; a vacuum cleaner; Multiplex display rack; steel shelves for library; were added as equipment for the Museum and offices.

F. Photographs

Negatives in circulation 51.

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A revision of the index for each book of photographs and a general index was prepared.

350 prints were labeled and posted and all negatives were filed up to date.

Slides in circulation	327
Slides matted and bound	45
Bindings shellaced	150
Slides accessioned and carded	40

All slides have been checked for replacements, condition and repairs.

G. Publicity Clippings No work on these.

L. Thermal Activity

Hymen Spring has decreased in flow. Water level in upper pool 10" below rim. Travertine deposit increasing near the top of terrace.

Palette Spring shows increased flow, half of which has spread over the slope east of Devil's Thumb, some old basins reclaimed on East edge of flow.

Activity revived near the Tennis Court; the greatest flow at this spring for a number of years. Caused perhaps by ditch water flowing in a hole above the road.

Minerva Spring is overflowing from lower basin on three sides into cracks. A little color shows on the N.E. slope. Several basins have been refilled. Flow has increased. Algae, orange and green, now in evidence.

Cleopatra Spring, flow has decreased. Nearly half of the terrace front on the west side is dry.

Main and Mound show no change.

Cupid's Cave, the new spring just above, is increasing in size as water is now flowing from a crack 8' long to the east of the first outlet.

Blue Springs are well filled and overflowing to Pulpit Terrace.

Jupiter Spring has increased and is now flowing well down the slope on the South edge of the formation. It's coloring is the most beautiful it has been in the past year.

Highland Spring is inactive.

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Orange Spring Mound, no change.

Glen Spring, very slight flow.

Narrow Gauge, inactive.

Angel Terrace shows a bubbling outlet 3" high on the north near the trail. The flow has increased and rapid deposition of travertine continues. Empty basins near the center are refilled.

M. Personnell

Park Naturalist on duty all month except 3 days on furlough and 1 day on sick leave.

Assistant Park Naturalist spent 6½ days in Berkeley and the Bay region of California and in the San Francisco office in assisting and consulting with National Park Service men and in speaking to schools and clubs. 4½ days of leave were taken. He returned to Yellowstone on April 17 and has spent the remainder of the month renovating the basement of the museum for storage and moving materials and furniture into the new arrangement.

The Junior Park Naturalist spent all but 5 days on museum work and museum accessioning. 5 days were devoted to photographic file and slides and other clerical work.

Wilfred Neal returned from leave on April 3 and has been on duty all month assisting in museum work and in renovating the basement as well as caring for the janitor work.

Respectfully submitted

C. Max Bauer

C. Max Bauer
Park Naturalist

CC: Dr. Sampus
Director
Dr. Russell and Mr. Hall

CMB:HCS

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10,074-6 New Basins on the northeast slope of Hymen Terrace. The depth of travertine increased ten to twelve inches from April 1932 to Feb. 1933, when picture was taken.

Pallette Spring in Winter. Feb. 1933. Increased deposition of Travertine 8" since July 1932.

Angel Terrace. One season's deposition of travertine (the center mound) from April 1932 to Feb. 1933. Mound entirely covered with Sulphur Bacteria. 10075-3. Companion picture to 10075-5.

Angel Spring. Feb. 1933. Arrow marks the bubbling outlet. Top of New Mound. Companion to 10,075-3. Beautiful display of Sulphur Bacteria.

Rhyolite flow lying on sedimentary shale and sandstone, showing irregular contact on west rim of Mt. Everts.

YELLOWSTONE
NATIONAL P
LIBRARY
4475

June 2, 1933

REPORT OF THE NATURALIST DEPARTMENT

MAY, 1933

I. CURRENT OPERATIONS

A. Public Contact

Visitors: 45 members of Rotary International visited Mammoth on May 14th and the Museum was opened for them. The Rotary District Convention was held in Livingston.

On May 17th, 32 officers of the P.T.A. from eastern states visited the Museum, Hot Springs and Tower Falls and were conducted by members of the permanent staff.

On May 23rd Yellowstone Park Rangers and officials visited the Mammoth Museum and Library.

On May 8 Chief Clerk B. A. Hundley spoke on "The History of Yellowstone Park" before the Kiwanis Club of Helena, Montana.

II. PERMANENT PROJECTS

A. Administrative.

The regular staff was on duty all month: Among the items which received particular attention the Library, the basement workshop, sales publications, program and work of the summer staff may be mentioned. Arrangements were also made to place two men, Dr. Harry M. Kelly and Mr. Edward M. Allen at the "Century of Progress" in Chicago.

B. Nature Notes

No work was done on Nature Notes during the month, but nine requests to be placed on mailing list were received from interested people, most of whom represent schools.

C. Library

The painting and steel shelving were finished during the month and the books placed on the shelves in order according to

June 2, 1938

REPORT OF THE NATURALIST [illegible]

MAY, 1938

I. [illegible]

A. Public Contact

Visitors: 48 members of Rotary International visited Mammoth on May 14th and the Museum was opened for them. The Rotary District Convention was held in Livingston.

On May 17th, 30 officers of the F.T.A. from eastern states visited the Museum, the Springs and Tower Falls and were conducted by members of the permanent staff.

On May 23rd Yellowstone Park Rangers and officials visited the Mammoth Museum and Library.

On May 9 Chief Clerk B. A. Hundley spoke on "The History of Yellowstone Park" before the Bismarck Club of Bismarck, Montana.

II. [illegible]

A. Administrative.

The regular staff was on duty all month: Among the items which received particular attention the Library, the basement workshop, sales publications, program and work of the summer staff may be mentioned. Arrangements were also made to place the men, Dr. Harry M. Kelly and Mr. Edward M. Allen at the "Century of Progress" in Chicago.

B. Nature Notes

No work was done on Nature Notes during the month, but nine requests to be placed on mailing list were received from interested people, most of them represent schools.

C. Library

The painting and steel shelving were finished during the month and the books placed on the shelves in order according to

the Dewey Classification. The Library Accession list was returned by Mr. C. Henry Smith who states that the work of classification was done by Miss Emma A. Jackson.

The catalog numbers cover all of the 2146 books and pamphlets accessioned up to February 1st of this year. The task of labelling the books and carding will be delayed until next fall. However, all are arranged systematically including the magazines which are placed in a special case in alphabetical order. It is planned to set a magazine stand for current periodicals in one corner so that these can be used by members of the Park Service staff.

For the present the Library will remain a reference library as very few duplicates are in the stacks.

An important accession during the month was 5 copies of "A Key to the Mosses of Yellowstone National Park" by Ranger Naturalist, Dwight C. Smiley.

Magazines and periodicals received	19
Books and pamphlets received	15
Books in circulation	10

35 additional books were accessioned, classified and placed on the shelves.

D. Museums

Accessions: 92 new accessions have been entered in the accession book. 16 articles have been accessioned and cataloged during the month.

Work: Museum work was confined to arranging cases and exhibits and replacing materials in the geology cases. The new room on Earth Science at the rear is finished but much remains to be done to install proper exhibits.

The floors in the Mammoth Museum were re-finished and the rooms and cases cleaned ready for opening June 11th.

Fishing Bridge Museum was visited on May 28th and found to be in first-class condition except for the snow which was 4 to 6 feet deep all around it and still reaching to the eaves where snow was shoveled from the roof.

E. Equipment

A new desk for the Park Naturalist and one for the Assistant Park Naturalist were received.

F. Photographs

263 negatives and prints have been received during the past month. All have been received and cataloged. Part of the labels and all of the work of pasting remains to be done.

650 slides have been shellacked to insure longevity of bindings during their summer usage. Approximately 200 remain to be shellacked. 64 untinted and unbound slides have been purchased from the Washington office. These will be tinted and put into usage during the summer.

G. Publicity Clippings No work on these.

H. Herbarium

Three and a half days, part of which help was furnished by the ranger department, were spent in the sorting, labelling and filing of the innumerable plant specimens collected since 1929. The entire herbarium is now filed according to species, genus, family and class in the fine herbarium cases received a year ago.

I. Sales Publications

All sales publications have now been arranged in the new sales publications room. The greater part of a week has been devoted to this work, including the inventory and balancing of accounts.

J. Miscellaneous

One and a half days were spent on rewriting and correcting old labels and the writing of new labels for the nature trails.

All report forms were corrected for cutting of seasons stencils.

Some time has been spent on preparing memos to Ranger Naturalists, and correcting and mailing of manuals.

L. Thermal Activity

Blue Spring: Two large holes have drained several of the bigger basins on the north edge.

Baby Spring: The flow has greatly diminished.

Cupid's Cave: The deposits of travertine have built up about the spring over 2 inches during the month.

Main Terrace: East end active and some basins filled with water--slight activity on west end. 60 ft. to the south 4 foot bubbling pool.

Mound Terrace: A slight flow to the north. On the East slope there is a large flow of water and an extensive growth of dark green and chocolate brown algae. New basins have formed during the spring months.

Highland Terrace: Inactive.

Orange Spring Mound: No change.

White Elephant Back Terrace: No change.

Jupiter Terrace: No change.

Pulpit Terrace: No change.

Hymen Spring: Flow decreasing.

Palette Spring: Flow increasing-deposition of travertine rapid.

New activity near Tennis Court is covering a greater area, old basins have been refilled to the west--flow has increased slightly.

Minerva Terrace: No change.

Cleopatra Terrace: No change.

Angel Spring and Terrace: Flow increasing, deposition quite rapid--more basins reclaimed--spouting spring to the north increased to six inches in height.

M. Personnel

Park Naturalist was on duty all month except one half day of furlough.

Assistant Park Naturalist was on duty all month.

The Junior Park Naturalist was on duty all month except one day, May 31st, on leave.

The Janitor, Wilfred Mead was on duty all month.

Miss Antoinette Knaff, stenographer for the Naturalist Department, reported for work at noon of May 10th and spent the remainder of that week in the Superintendent's offices; began work in the Naturalist's office at noon on May 15th and was on duty the remainder of the month.

Respectfully submitted

C. Max Bauer
Park Naturalist

CC: Dr. Bumpus
Director
Dr. Russell and Mr. Hall
CMB:AK

Respectfully submitted

Dr. Lee Jones
Park Botanist

View of Mammoth Library.

View of the Mammoth Library.

View of Mammoth Library.

Mounts recently received by the Mammoth Museum.

Mounts recently received by the Mammoth Museum.

July 5, 1933

REPORT OF THE NATURALIST DEPARTMENT

JUNE, 1933

I. CURRENT OPERATIONS

A. Public Contact

General Statement

The opening of the tourist season has brought on the many summer activities. The Museum at Mammoth was opened on June 11th from 8:00 a.m. to 5:00 p.m. and has been open every day since. Beginning with June 18th it has been open from 8:00 a.m. to 8:00 p.m. as have also the museums at Old Faithful and at Fishing Bridge. Norris Museum opened June 20th and is on daily schedule from 8:00 a.m. to 5:00 p.m. Madison Museum opened on this schedule on July 1st.

The pre-season trip, consisting of the permanent staff, three senior ranger naturalists, and four new ranger naturalists, started with a general conference on Monday afternoon June 12th. On June 13th the group took a bus, through the courtesy of Mr. Nichols and Mr. Kammermaer of the Transportation Company, for the Upper Geyser Basin stopping at many of the points of interest along the way. The evening was spent at Old Faithful Museum discussing the work of the Department. On the 14th we returned to Mammoth Hot Springs via Fishing Bridge, Canyon, and Tower Falls. The 15th was spent in the vicinity of Headquarters with a walk over the terraces in the morning and a trip around Bunsen Peak in the afternoon.

1. Guided Trips

The regular guided trips at Mammoth, Upper Basin, Fishing Bridge, and Canyon, and also Norris were begun on June 18th. Because of a smaller staff some reduction in the number of walks and caravans has been made.

1932	Guided Trips	156	Attendance	4039
1933	Guided Trips	126	Attendance	2269

2. Lectures

1932	Lectures	127	Attendance	13847
1933	Lectures	169	Attendance	11126

July 5, 1900

Report of the Naturalist Department

June, 1900

3. Summer Excursion

A. Profile Summary

General Statement

The opening of the Summer season was brought on the most unusual weather. The Excursion as planned was carried on from 11:30 p.m. to 8:00 p.m. and has been open every day since. Beginning with June 24th it has been open from 6:00 p.m. to 8:00 p.m. as have also been the Excursions on Tuesday and Thursday evenings. Owing to the early sunset on July 1st we shall return to July 1st.

The passengers carried, considering the unusual weather, have been satisfactory, and there has been no trouble whatever. On June 12th the Excursion Steamer Sea Queen, for the Upper Island trip, left the pier at 7:30 p.m. instead of 8:00 p.m. The steamer was delayed in the morning and a trip around Salmon Peak in the afternoon.

Guided Trips

The regular guided trips at Mammoth, Upper Inca, Fishing Valley, and Cliff Dwelling were begun on June 15th. Because of a shortage which was reported in the number of male and capable boys help.

1899	Guided Trips	152	Attendance 4598
1900	Guided Trips	132	Attendance 3971

Catering

1899	Lunches	127	Attendance 1109
1900	Lunches	108	Attendance 1134

June 12, 1933

MEMORANDUM FOR THE RANGER NATURALISTS:
#4

Subject: LECTURES

The following is a list of subjects to be covered by those lecturing at the various stations. You are asked to consult the senior naturalist under whom you are to serve for suggestions as to the topics you are to cover. You are given a choice of subjects in an endeavor to vary your lectures as you present them. We are requesting that all lectures, including announcements, be limited to thirty minutes except the bear lectures at Old Faithful which will be forty minutes.

Under date of May 20, 1930, Official Order No. 230, from the Washington Office, requests that an introductory statement regarding the National Park Service is to be used at the beginning of All official lectures and guided tours. Excerpts of this order are attached. Your senior naturalist will be glad to assist you in suggesting various ways in which this material can be given without duplication at the various lectures. He will also give you some help concerning announcements of activities and sale of publications.

The following program, arranged for each day of the week, is to give general subjects to be used at each point where lectures are given as a guide in selecting titles so that visitors who are making a leisurely trip around the loop will not hear the same lecture on three successive nights. The general subject may be used or a sub-title under it which will treat of some special phase of the general subject as it is portrayed in Yellowstone Park. Particular attention is called to the subject, "What to Do and How to See the Yellowstone". This can be used as a topic to occupy the usual thirty minute lecture or, if preferred, it can be used as a ten minute introduction to another lecture. All lectures must be over at 9:00 P.M.

Sunday:	1. Birds, or 2. Flowers
Monday:	1. Glacial and Physiographic Geology, or 2. History and Indians
Tuesday:	1. What to Do and How to See the Yellowstone, or 2. Birds, or 3. Animals
Wednesday:	1. Plant Life, or 2. Fish, or 3. History and Indians
Thursday:	1. Forests and Forestry, or 2. Ecology
Friday:	1. Volcanic Geology and Thermal Activity, or 2. History and Indians
Saturday:	1. What to Do and How to See the Yellowstone, or 2. Animals 3. Birds

C.Max Bauer
Park Naturalist

EXCERPTS FROM OFFICIAL ORDER NO. 230

Attention has already been called to the need for including in every lecture and every guided trip a statement regarding the aims, extent, and activities of the National Park Service.

Among worth-while statements that should be included are the following:

1. The national park system, first begun with the creation of Yellowstone in 1872, now comprises 22 national parks and 40 monuments.

2. The national parks have been set aside for the benefit and the enjoyment of the people.

3. The national parks contain the finest natural phenomena of the Nation, therefore, every visitor should gain increased knowledge and inspiration.

4. To help the visitor understand and interpret the principal features, the National Park Service has established an educational branch. Rangers and ranger naturalists in uniform are at hand to answer questions, take you on a nature walk, furnish you illustrated lectures, and explain museum exhibits.

5. The roads, trails, bridges, camp grounds, telephone lines, etc., within these parks are built and maintained at the expense of the Federal Government. A park superintendent is in direct charge of all governmental activities.

6. Hotels, stores, transportation service, and similar public utilities are owned by private individuals or corporations and are operated under a permit or contract from the Department of the Interior. Such facilities are closely regulated by the Government as to rates and service.

7. Every effort is being made by the National Park Service to make your stay within this park enjoyable and profitable.

8. Yellowstone Park now contains approximately 3438 square miles.

June 12, 1933

MEMORANDUM TO THE RANGER NATURALISTS:
#5

The following is the schedule of guide and lecture service to be carried out under the supervision of the Naturalist Department for the season of 1933. This schedule is subject to change if the season's travel does not warrant. Every effort will be put forth to serve the small as well as the large parties.

WE ARE REQUESTING THAT ALL LECTURES SAVE THE BEAR LECTURES AT OLD FAITHFUL, WHICH WILL BE 40 MINUTES, BE RESTRICTED TO 30 MINUTES.

MAMMOTH

ALL WALKING PARTIES START FROM LIBERTY CAP

MUSEUM HOURS 8:00 a.m. to 8:00 p.m.

Sunrise Stroll (Terrace Trail)	6:00a.m.-- 7:30a.m.
Nature Walk (Terrace-Forest Trail)	8:30a.m.--11:00a.m.
Buffalo-Terrace Trek (Auto caravan leaves museum for buffalo corral and terraces).	2:00p.m.-- 4:00 p.m.
Nature Talk; Lodge Recreation Hall (illustrated)	7:20p.m.-- 8:00 p.m.
Campfire Talk and Entertainment-Illustrated- Mammoth Auto Camp	8:00p.m.-- 9:00p.m.

NORRIS

MUSEUM HOURS 8:00 a.m. to 5:00 p.m.

The museum hours will depend somewhat upon the number of visitors; the museum may have to be opened earlier or later.

Basin Walk -Morning	10:00a.m.--11:00a.m.
Afternoon - according to bus schedules	

MADISON

MUSEUM HOURS 8:00 a.m. to 5:00 p.m.

The museum hours are subject to the same regulations as Norris.

Miscellaneous hikes- Purple Mountain, National Park Mountain, etc.
(Time and objective determined by visitors and ranger duties)
Campfire Talk-(Time optional dependent upon crowd, early hour preferred)

OLD FAITHFUL

ALL WALKS START FROM OLD FAITHFUL GEYSER CONE

MUSEUM HOURS 8:00 a.m. to 9:30 p.m.

Nature Walk-Observation Point Trail	8:00a.m.--10:30a.m.
Greater Geysers Walk	8:30a.m.--11:00a.m.
Chasing Geysers (Auto caravan leaves museum for geyser basin)	2:00p.m.-- 4:00p.m.
Bear Lecture-at Bear Feeding Ground	7:15p.m.-- 7:45p.m.
Museum Lecture-Illustrated-Old Faithful Amphitheatre	8:15p.m.-- 8:45p.m.
Illuminated Eruption of Old Faithful	9:00p.m.

WEST THUMB

Hot Spot Walk (time to be determined by bus schedule)	
Campfire Talk (by announcement)-Thumb Camp Ground	7:30p.m.-- 8:30p.m.

FISHING BRIDGE

MUSEUM HOURS 8:00 a.m. to 8:00 p.m.

Nature Stroll-Lakeview Trail	8:00a.m.--10:30a.m.
Lakeshore Drive-Auto caravan from museum to Fish Hatchery and Natural Bridge	2:00p.m.-- 4:00p.m.
Campfire Talk and Entertainment-Illustrated	8:00p.m.-- 9:00p.m.

CANYON

Nature Walk-Uncle Tom's Trail (from Lodge)	8:30a.m.--11:00a.m.
Nature Walk-Red Rock Trail(from Hotel and Ranger Station)	8:30a.m.--11:00a.m.
Canyon View Drive-To Inspiration and Observation Points (Auto caravan from ranger station)	2:00p.m.-- 4:00p.m.
Nature Talk-Illustrated-Canyon Lodge Lobby	7:20p.m.-- 8:00p.m.

MT. WASHBURN

Lectures to bus visitors and others; time subject to bus schedules; number of lectures determined by crowd at any one time.

C. Max Bauer
Park Naturalist

SUMMARY OF NATURALIST ACTIVITIES

~~week~~
For ~~month~~ ending ~~June 17~~, 1933
Pre season

Yellowstone National Park

Place	Field Trips		Auto Caravans			Lectures		Special Parties		Museum	* Misc. Contacts	Total	Publications Distributed	
	No.	Attend-ance	No.	No. Cars	Attend-ance	No.	Attend-ance	No.	Attend-ance	Attend-ance	No.	Contacts Made 1933	No.	Sales $
Mammoth			2	16	79					986		1065	23	6.10
Norris														
Madison														
Old Faithful										361		361		
West Thumb														
Fishing Bridge														
Canyon														
Mount Washburn														
Totals 1932	2	68				4	153			4008		4350		
Totals 1933			2	16	79					1347		1416	23	6.10

General Memoranda:

Submitted: _____, 1933

Park Visitors During Period: 18,162

Signed: Ormax Bauer

Title Park Naturalist

B-1933 ~~*Miscellaneous Contacts nclude short talks given at Artist and Inspiration Points and Mt. Washburn and are exclusive of other activities listed.~~

SUMMARY OF NATURALIST ACTIVITIES

For month ending June 30, 1933 Yellowstone National Park

Place	Field Trips No.	Field Trips Attendance	Auto Caravans No.	Auto Caravans No. Cars	Auto Caravans Attendance	Lectures No.	Lectures Attendance	Special Parties No.	Special Parties Attendance	Museum Attendance	* Misc. Contacts No.	Total Contacts Made 1933	Publications Distributed No.	Publications Distributed Sales $
Mammoth	21	182	13	119	432	23	940	1	69	3805		5426	214	62.45
Norris	34	520				9	162			2538		3220		
Madison Opened 6/30						3	77			30		107		
Old Faithful	24	696	13	257	882	21	4031	3	116	8449		14,184	141	43.65
West Thumb	11	299				9	277	5	75			651		
Fishing Bridge	13	235	13	91	341	13	3527		4151 →			8254	195	68.3[illegible]
Canyon	23	337	20	134	484	18	1928	2	223			2972		
Mount Washburn						73	184	1	22			206		
Totals 1932	156	4039	39	579	2239	127	15847			21437		43562	408	192.65
Totals 1933	126	2269	59	601	2149	169	11126	12	505	18971		35029	550	174.45

General Memoranda:

Submitted: _____, 1933

Park Visitors During Period: 23,636

Signed: Omax Bauer

Title Park Naturalist

B-1933 *~~Miscellaneous Contacts include short talks given at Artist and Inspiration Points and Mt. Washburn and are exclusive of other activities listed.~~

3. Auto Caravans

1932	Auto Caravans	39	Attendance	2239
1933	Auto Caravans	59	Attendance	3149

4. Special Parties

Bishop Shaler and party of six from Omaha, Nebraska, including Professor J. K. Knight of Ohio State University.

Mr. Bert Scott and family of the Hall-Scott Motor Company of Berkeley, California.

Mr. Lawrence Vail Coleman, Director, American Association of Museums.

General Dixon, Cleburne, Texas.

Professor Brodie and party of 65 Hawaian school teachers.

5. Museum

1932	Attendance	21437
1933	Attendance	18971

B. Ranger Naturalist Staff

Herbert Lystrup, senior ranger naturalist at Old Faithful, worked at Mammoth Museum for ten days. June 5--June 30, inclusive.

W. B. McDougall, senior ranger naturalist at Mammoth. June 11th--June 30, inclusive.

Harry M. Kelly at Chicago Century of Progress. June 8--June 30, inclusive.

Frank Oberhansley, senior ranger naturalist at Fishing Bridge Museum. June 16--June 30, inclusive

E. T. Bodenberg, Norris Museum. June 20--June 30, inclusive.

Trusten E. Peery, Old Faithful. June 29--June 30, inclusive.

David deLancey Condon, Mammoth. June 16--June 30, inclusive.

Willis T. Smith begins July 1st at Madison Museum

Kenneth S. Agerter, Canyon. June 16--June 30, inclusive.

3. Auto Caravans

1933	Auto Caravans	39	Attendance	[illegible]
1935	Auto Caravans	39	Attendance	2149

4. Special Parties

Sidney Shaker and party of the Iowa Grade, Sherman, including Professor J. E. Knight of Ohio State University.

Mr. Bert Scott and family of the Hall-Scott Motor Company of Berkeley, California.

Mr. Lawrence Vail Pulsman, Director, American Association of Museums.

General Simon, Cincinnati, Ohio.

Professor Brodie and party of 65 Hawaiian school teachers.

5. Museum

1933	Attendance	[illegible]
1935	Attendance	13971

6. Ranger Naturalist Staff

Herbert Lystrup, senior ranger naturalist at Old Faithful, worked at Mammoth Museum for ten days. June 6—June 30, inclusive.

W. S. McDougall, senior ranger naturalist at Mammoth. June 11th—June 30, inclusive.

Harry W. Kelly at Chicago Century of Progress. June 6—June 30, inclusive.

Frank Oberhansley, senior ranger naturalist at Fishing Bridge Museum. June 16—June 30, inclusive

E. T. Hedenburg, Norris Museum. June 20—June 30, inclusive.

Preston E. Perry, Old Faithful. June 20—June 30, inclusive.

David Delaney Gordon, Mammoth. June 16—June 30, inclusive.

Willis T. Smith begins July 1st at Madison Museum

Kenneth L. Agnew, Oregon. June 16—June 30, inclusive.

B. Ranger Naturalist Staff (Continued)

Dwight C. Smiley, Fishing Bridge. June 16--June 30 inclusive.

Arthur Nash, Mammoth. June 16--June 30, inclusive.

Thatcher Allred, Old Faithful. June 16--June 30, inclusive.

Charles Bowman Hutchins, Fishing Bridge. June 16--June 30,incl.

Robert W. Spalding, Canyon. June 16--June 30, inclusive.

Howard R. Stagner, Old Faithful. June 16--June 30, inclusive.

Edward M. Allen, Chicago Century of Progress.June 1--June 30, inclusive.

C. Inspection Trips

The permanent naturalist staff acted as a faculty to instruct the ranger naturalists on the pre-season trip and have been at the various stations taking part in the work and visiting activities almost every day since the season opened.

The park naturalist and the chief ranger consolidated the ranger and naturalist offices at Old Faithful on June 21st, and on June 22nd worked out additional plans for cooperation between the departments and doing away with duplication of effort.

II. PERMANENT PROJECTS

A. Nature Notes

The May-June or "Spring" number of Nature Notes was edited and mimeographed. It was mailed out on June 29th and 30th. Most of the preparation of this issue was in the hands of the Junior Park Naturalist.

B. Library

Magazines and periodicals received	27
Books and pamphlets received	8
Books in circulation	72

C. Museum Accessions

One day was spent on accession work by the Junior Park Naturalist at Fishing Bridge Museum.

5. Tenant Materials Left (Continued)

Mullet L. Bailey, Washing Machine. Date In--June 20 Quarters.

Arthur Bush, Clothes. Date In--June 20, Quarters.

Theodore Allred, Old Fat Stuff. Date In--June 20, Premises.

Charles Thomas Simpkins, Fishing Outfit. Date In--June 20,Lot.

Robert T. Chatelain, Camper. Date In--June 21, Quarters.

Ronald R. Chapman, Old Furniture. Date In--June 20,-Quarters.

Edward C. Allen, Chicago Factory of Progress.Date In--June 20, Quarters.

6. Impounded Items

The following impounded items are a Courtesy to Inmates stored the longer obligation on the part of the State to keep it the maximum holding part is the most the district authorities almost every day since the opening opened.

The part in quantity was the total number committed the number was slightly ahead of the Saturday on June 23rd, and on June that number was additional places the management reopens the department was being used with additions as before.

7. Visitors Station

8. Escape Data

The Daytime to "Daily" Number of Escape Data was called and discovered. It was called off on the 6th day. Some of the information of Mr. Ivey was in the hands of the Junior Work Supervisor.

9. Inmates

Inmates not previously reported	21
Items not Reported received	2
Items to discipline	23

10. Inmate Counting

The day was spent on counting work by the Junior Inmate Supervisor of Training Section.

D. Lantern Slides

An order for coloring and preparing of 85 slides received in May was placed. Color suggestions prepared by George L. Crowe. An order for 35 additional slides to be made from N. P. S. negatives was also placed. 14 slides were mended and shellacked by H. Lystrup and Wilfred Mead and 25 additional slides schellacked by Wilfred Mead. 715 slides were in circulation during June, most of which are in use by the ranger naturalists at the various stations

E. Museum Work

Mammoth Museum was opened on June 11th. Some re-arrangement of cases was made. The floor was refinished with floor seal. The Norris, Fishing Bridge, and Old Faithful Museums and cottages were cleaned and shutters stored. This work was done by the Park Naturalist and Assistant Park Naturalist. The latter also delivered tents, camp equipment, and other supplies to the various stations.

A garden has been planted in the Old Faithful Museum Court. A ground plan, worked out by ranger Fred Johnston and Junior Park Naturalist Baggley, has been followed. A number of small trees and plants have been set out, and sod covers the entire court except for a meandering walk and a rock bottomed pool. The planting work is not complete as it will require several years to round out a natural planting typical of the region. The rear wall of the court has been opened out and a lattice work of 3 inch upright poles placed in the end so that one is able to look from the museum court into the amphitheater at the rear.

F. Equipment

The two telescopes have been mounted for use. One was set up on the parapet in front of the Fishing Bridge Museum by Mr. Crowe and the Park Naturalist on June 5th and has been used daily by large numbers of people. On June 30th the base for the other telescope was made on the top of Mt. Washburn. It is now in operation.

G. Photographs

Eight prints and 41 negatives were in circulation during the month. 90 negatives and 40 prints were received, checked and filed during the month. No labelling nor pasting was done.

H. Sales Publications

Considerable time has been spent on inventory, issuing, and delivery of publications to the museums, and on preparing reports and bookkeeping facilities in connection with the sale of these.

7. Leaving Alone

8. Taking Leave

9. Comment

10. Interaction

11. Define Individuality

K. Personnel

The Park Naturalist has been on duty all month administering the work of the Naturalist Department and supervising the personnel.

The Assistant Park Naturalist worked on opening the museums, assisted on the pre-season trip, conducted 5 special parties, delivered 6 lectures, supervised 12 programs, and spent 23 days out in the park on supervision.

The Junior Park Naturalist assisted on the pre-season trip, handled all sales publications and clerical work in the office, supervised programs and nature walks, delivered several lectures and assisted in the planning of programs and supervision of the naturalist work.

Miss Antionette Knauff has done all the stenographic and much clerical work for the department.

Wilfred Mead has assisted in opening the museums and acted as caretaker of the Mammoth Museum.

On June 5th two laborers were employed to take care of the museums and plantings at Old Faithful and at Fishing Bridge.

Respectfully submitted

C. Max Bauer
Park Naturalist

CC: Superintendent
Director
Dr. H. C. Bumpus
Ansel F. Hall
Dr. C. P. Russell
Museum

c. [illegible]

[illegible]

THERMAL ACTIVITY REPORT

JUNE, 1933

MAMMOTH HOT SPRINGS

Angel Spring is flowing from a crack just below the top of the formation. The flow is increasing at two outlets to the north.

Baby Spring is decreasing.

Blue Springs is increasing--overflowing to the east and south.

Cupid's Cave shows a slight increase.

Cleopatra Springs shows increased flow.

Orange Spring Mound shows no change.

Mound Terrace shows no change.

Elephant's Back shows no change.

Minerva Terrace shows no change.

Highland Terrace is inactive.

Palette Spring shows an increasing flow.

Hymen Terrace shows an increase in flow.

Opal Springs near the tennis court has deposited travertine to the depth of two inches.

Jupiter Spring is increasing in flow and water is covering the slope in two places.

NORRIS BASIN

Emerald Spring is boiling violently.

Blue Geyser shows great activity. Interval is about 10 minutes.

Ebony Geyser plays fifty feet high. Approximate interval is 24 hours.

Valentine Geyser has played three times since the opening of the season. It played for two and a half hours. Approximate interval, 7 days.

[illegible]

[illegible], 1952

[illegible]

[illegible] is flowing from a crack just below the top of the formation. The flow is increasing at two outlets to the north.

[illegible] is decreasing.

[illegible] is increasing—overflowing to the [illegible] depth.

Cupid's Cave shows a slight increase.

[illegible] shows increased flow.

[illegible] shows no change.

[illegible] shows no change.

[illegible] shows no change.

[illegible] shows no change.

Highland Terrace is inactive.

[illegible] shows an increasing flow.

[illegible] shows an increase in flow.

[illegible] shows the [illegible] has [illegible] to the depth of two inches.

[illegible] is increasing in flow and water is arriving the slope in two places.

[illegible]

[illegible] is boiling violently.

[illegible] shows great activity. Interval is about 15 minutes.

[illegible] plays fifty feet high. Approximate interval is [illegible] hours.

[illegible] has played three times since the opening of the season. It played for two and a half hours. Approximate interval, 7 days.

Minute Man Geyser is very irregular.

Steamboat Geyser is very very irregular in inter vals of play. Erupts for about 15 minutes.

Constant Geyser plays at intervals of 1½ minutes.

Whirligig Geyser plays for 25 minutes at intervals of about 1½ hours.

OLD FAITHFUL

Jewel Geyser still functions as a "handkerchief pool". It plays from 5 to 7 minutes.

Saphire Pool Competes with Emerald Pool for beauty.

Beehive Geyser has not played this season

Giantess Geyser has not played since December 7th.

Rainbow Pool has been active as a geyser all season. There is no semblance of color left. Action of the hot water has killed algae. It was necessary to make a ditch along path to prevent overflow from washing out path.

Giant Geyser played June 2nd and not since.

WEST THUMB

There has been no marked change in this area.

Observations by George C. Crowe - Mammoth
E. T. Bodenberg - Norris
H. Lystrup - Old Faithful
D. Kipp - West Thumb

Minute Man Geyser is very irregular.

Abundant Geyser is very very irregular in later rain of plant. Grants for about 15 minutes.

Constant Geyser plays at intervals of 1½ minutes.

Fairlight Geyser plays for 25 minutes at intervals of about 1½ hours.

OLD FAITHFUL

Jewel Geyser still functions as a "handkerchief pool". It plays from 5 to 7 minutes.

Lighting Pool Computes with Emerald Pool for beauty.

Emerald Geyser has not played this season.

Minutes Geyser has not played since December 7th.

Bathing Pool has been active as a geyser all season. There is no evidence of water left. Action of the wet water has killed algae. It was necessary to make a ditch along path to prevent wetting from wetting wet path.

Giant Geyser played from 2nd and 3rd mode.

[illegible]

There has been no marked change in this area.

Observations by George C. Crowe - Mammoth
E. [illegible] - Norris
L. Lystrup - Old Faithful
D. Kipp - West Thumb

Park Naturalist Bauer discusses the geology of the Gallatin Range for the ranger naturalists on the preseason trip.

Viewing the lakeshore through the new telescope in front of the Fishing Bridge Museum.

Another talk--on lava flows--given to the ranger naturalists on the pre-season trip in the Gardiner Canyon.

A view of the planting in the court of the Old Faithful Museum.

August 3, 1933

REPORT OF THE NATURALIST DEPARTMENT

JULY, 1933

I. CURRENT OPERATIONS

A. Public Contact

General Statement

Perhaps the most interesting feature of the 1933 season for July is the fact that there was a gradual increase in tourist travel over last year. In other words, by the end of July the number of visitors was 94,000 as compared with 92,000 of last year.

Educational contacts also increased and exceeded July of last year, and it should be pointed out in this connection that some of the lectures of last year were over-estimated, whereas, this year our contacts have been actual counts. When, in addition to this, it is considered that we have fewer ranger naturalists, the showing for this season is very good indeed.

1. Guided Trips

1932	Guided Trips	698	Attendance	23351
1933	Guided Trips	375	Attendance	12138

2. Lectures

1932	Lectures	459	Attendance	85211
1933	Lectures	2179	Attendance	96408

3. Auto Caravans

1932	Auto Caravans	146	Attendance	10041
1933	Auto Caravans	122	Attendance	7346

4. Special Parties

1932	Included in other activities.			
1933	Parties	52	Attendance	3665

The permanent staff contacted many special parties during the month, details of contacts follow.

On July 3rd we had a visit from Mr. Arno B. Cammerer, Associate Director of the National Park Service; also on that date Mr. and Mrs. Dan Greenburg of Casper, Wyoming and Mr. William H. Jackson,

August 8, 1922

Letter to the Editorial Department

July, 1922

1. Summary discussion

a. Public Events

General Statement

Perhaps the most interesting feature of the 1922 census for July is the fact that there was a marked increase in monthly sales over last year. In other words, by the end of July we sold as much as we sold during the whole of last year, and it should be pointed out in this connection that the returns of last year were very conservative, many of our customers have been actual counts. When, in addition to this, it is considered that we have lower prices on practically the whole line, it is very good indeed.

b. Detail Data

1920	Sales Value	000	(Thousands)
1922	Total Sale	875	(Thousands)

c. Imports

1920	Imports	400	(Thousands)
1922	Imports	1175	(Thousands)

d. Our Service

1920	Our Service	144	(Thousands)
1922	Our Service	140	(Thousands)

e. Local Data

1920 Included in other activities.
1922 Pushing 82 (Thousands)

The personnel staff maintained many special services during the month, details of which follow.

On July 3rd we had a visit from Mr. Arno B. Commerce, Assistant Director of the National Trade Journal. Also on that date Mr. [illegible] Secretary of the Chamber of Commerce, [illegible]

explorer and photographer for the Hayden Surveys, of New York City.

On July 8th Reverend Davies, radio broadcaster for the Sotix City Journal, visited the park and received considerable help from the assistant park naturalist.

On July 12th the park naturalist accompanied Mr. W. H. Jackson to the Bottler ranch near Emigrant, Montana where a very pleasant meeting was had with Mrs. Fred Bottler who has been living near the entrance of Yellowstone Park since 1881.

On July 13th the University of Tours came into the park with three buses and consisted of about 152 people.

On July 14th and 15th a party from Oglethorpe University, consisting of about 150 people visited the park and were conducted on both the north and south loops by one or both the naturalists who spoke to them along the way at various points of interest.

On July 19th, 20th, and 21st Assistant Park Naturalist Crowe made a trip to the Tensleep Meadows in the Big Horn Mountains of Wyoming where he organized the work of the 4-H Club of four counties, gave lectures and nature walks, and interested the young people in starting a small museum of specimens of trees, flowers and rocks. On this trip 250 children were in attendance at the camp, and the Wyoming leaders were especially pleased with the service rendered to them by Yellowstone National Park.

July 21st and 22nd a group of a hundred boys with the Valley Ranch saddle horse trip camped at West Thumb and Squaw Lake and were contacted by the ranger naturalists.

On July 24th the Georgia Caravan from Atlanta Georgia, including 166 people entered the park and was given special attention at Mammoth and other points on the loop. On this day there was also a special group consisting of the Temple workers of Salt Lake City, 38 in number; and the Campfire Girls of Rawlins, Wyoming, 24 in number.

During the month there were visits by a large number of geologists from the East who conferred with the park naturalist and others about work which they are carrying on either in the park or adjoining it.

During this month we also had a visit from Dr. A. W. Grabau of the Geological Survey of China, formerly with Columbia University. He spent ten days in the park.

A contribution to the programs was made this month by the Savages at the Canyon Lodge when they presented a historical pageant for the

visitors, entitled "The Washburn-Langford-Doane Expedition". This received considerable favorable comment.

The naturalists have contacted a large number of parties that have come into the park because of winter work done by the ranger naturalists and permanent naturalists. Particular notice should be given to the increasing numbers of first time visitors from Wyoming and Utah as a result of the winter lectures given by these men.

July 31st the park naturalist and Mr. Charles B. Hutchins, ranger naturalist, accompanied Assistant Superintendent Edwards to Livingston for a joint meeting of the Kiwanis and Rotary clubs, and Mr. Hutchins gave a lecture on birds which was very well received.

There was a number of foreign visitors to the park, including two groups of Germans who enjoyed their trips immensely.

5. Museum

1932	Attendance	77,886
1933	Attendance	81,070

B. Ranger Naturalist Staff

The ranger naturalist staff was about the same in July as in the last of June. The following served during the entire month:

Herbert Lystrup, senior ranger naturalist at Old Faithful.
W. B. McDougall, senior ranger naturalist at Mammoth.
Frank Oberhansley, senior ranger naturalist at Fishing Bridge.
Harry M. Kelly, Chicago Century of Progress.
E. T. Rodenburg, Norris Museum.
Willis T. Smith, Madison Museum.
Kenneth S. Agerter, Canyon Station.
Truston E. Peery, Old Faithful.
David deLancey Condon, Mammoth.
Dwight C. Smiley, Fishing Bridge.
Arthur Nash, Mammoth.
Charles Bowman Hutchins, Fishing Bridge.
Howard R. Stagner, Old Faithful.
Robert W. Spalding, Canyon Station.
Thatcher Allred, Old Faithful.
Edward M. Allen, Chicago Century of Progress.
Ben Thompson, Wild Life Survey.

C. Inspection Trips

The permanent staff made numerous inspection trips into the park and visited the nature walks and lectures given by the ranger naturalists; also it should be mentioned that each one of them has relieved ranger naturalists from duty at least twice during the month, that

is, the ranger naturalists have received two days off during the month, and, in these cases Assistant Park Naturalist Crowe and Junior Park Naturalist Baggley have spent three to four days each week on this relief work, entering into all the activities of the stations. The Park Naturalist has also taken part in programs and done some relief work.

At West Thumb station there are located a permanent ranger and a temporary ranger who have taken part in the guiding of visitors over the West Thumb mud pots, pools, and geysers and have given nightly talks at the campfire. These men have been relieved four times during the month on their evening programs.

II. PERMANENT PROJECTS

A. Nature Notes

The July-August number of the Nature Notes was prepared and edited, and the stencils were cut during the latter part of the month. This issue is devoted largely to geology and related subjects.

B. Library

50 Library books in circulation.
23 Magazines and periodicals received.
19 New books and pamphlets received.
80 Books and pamphlets were accessioned this month.

The most important additions to the library this month were: an autographed copy of "The Sheep Eaters" by Allen and a bound copy of Legislative History of Yellowstone National Park. Also received reprints of "Mollusca of the Yellowstone Park, Teton Park, and Jackson Hole region", and a mimeographed copy entitled "The Radium Content of Some Travertine Deposits at Mammoth Hot Springs" by Schlundt.

2 days were spent on library accessioning; also two days were spent on typing of old manuscripts for the library.

C. Museum Accessions

The storage rooms in the basement of the Mammoth Museum have been put in order and are numbered as follows:

No. 1 Workshop
No. 2 Sales Publications Room
No. 3 Biology and general
No. 4 Geology, Histyry and Indian

Hereafter materials received will be accessioned and placed in their respective rooms from which they can be taken for exhibit

purposes.

Accessions were made for the materials placed in the field exhibits by Dr. Carl P. Russell. The number of accessions is 36.

Some new accessions received during the month were: photos, negatives, and sinew received from the Hofer estate through Mrs. Peterson; an obsidian knife found at Mud Volcano by "Shorty" Cummins; 2 boxes of butterflies collected and mounted by Mrs. Arnold.

D. Lantern Slides

The 84 slides previously purchased from Washington, tinted by Haynes, were catalogued and distributed to the stations for use by the ranger naturalists.

172 slides were in circulation the past month. Most of them used by ranger naturalists in giving lectures.

E. Museum Work

All the museums were open during the entire month. Mammoth, Old Faithful, and Fishing Bridge museums were open from 8:00 A.M. to 8:00 P.M.; Norris and Madison museums from 8:00 A.M. to 5:00 P.M. each day.

A flower display was started on the top of Mount Washburn in the lookout station by assistant Park Naturalist Crowe and temporary ranger Hurtle. This display has received considerable comment.

The flower display in the Fishing Bridge Museum has been considerably improved.

At Old Faithful the planting of the court was continued so that we now have a large number of the native flowers in the court there including some water plants and pond lilies in the pool. The rear end of the court has been worked over so that there is lattice work across the back end and gates instead of a wall with doors. This permits visitors to look through from the court into the amphitheatre or vice versa.

The term "Nature Shrine" has been dropped at the suggestion of Superintendent Toll in favor of "Field Exhibit." The field exhibits along the road between Mammoth and Old Faithful are being installed by Dr. Carl P. Russell and the following are nearly completed: Rhyo-Travertine Gulch Exhibit, Nymphaea Lake Exhibit, Beaver Exhibit, Tuff Cliff Exhibit. In addition to these there are two others, namely, the

Swan Lake panorama and the Firehole Canyon exhibit which have not yet been installed. These nature exhibits or field exhibits are in the form of experiments and considerable attention will be given next year to them to determine their usefulness and popularity.

A letter from Dr. John B. Reeside of the Smithsonian Institution in Washington states that he has not forgotten our requests for fossils from Yellowstone National Park, many of which were collected by the Hayden and Hague surveys. He is preparing these materials for shipment to us in the near future.

F. Equipment

Two desk chairs and four arm chairs were received for the naturalist office during the month; also eight straight-backed chairs for the library were received.

G. Photographs

78 negatives received and filed.
113 prints received and catalogued.
172 prints labelled to paste.
8 negatives in circulation.

H. Sales Publications

15 days spent on reports, sales publications and delivery of publications.

I. Personnel

The Park Naturalist has been on duty all month supervising the personnel and administering the work of the Naturalist Department.

Assistant Park Naturalist Crowe spent nearly all of his time out in the park at the various stations and museums, and has conducted many special parties and guided trips and given numerous lectures, also supervising the work of the ranger naturalists.

The Junior Park Naturalist has been especially busy with the sales publications and clerical work but has supervised many programs and nature walks out in the park and has delivered a number of lectures and supervised the work of the ranger naturalists.

Miss Antoinette Knaff has done the stenographic and clerical work for the department and has been on duty all month.

Mr. Wilfred Mead has spent nearly all of his time during the month on janitor work in the museum, library, and workshop at Mammoth.

At Old Faithful and at Fishing Bridge a laborer has been employed to take care of the museums and plantings around them. This month this work has been done by Mr. Victor Lund at Old Faithful and by Mr. Verde Watson at the Fishing Bridge Museum.

Respectfully submitted

C. Max Bauer
Park Naturalist

CC: Superintendent
Director
Dr. H. C. Bumpus
Ansel F. Hall and Dr. C. P. Russell
Museum

View of southwest portion of Old Faithful Court Flower Garden, July, 1933

Pool in Old Faithful Court Flower Garden, completed July 1933

SUMMARY OF NATURALIST ACTIVITIES

~~week~~
For month ending July 31, 1933
~~season~~

Yellowstone National Park

Place	Field Trips		Auto Caravans			Lectures		Special Parties		Museum	* Misc. Contacts	Total	Publications Distributed	
	No.	Attend-ance	No.	No. Cars	Attend-ance	No.	Attend-ance	No.	Attend-ance	Attend-ance	No.	Contacts Made 1933	No.	Sales $
Mammoth	81	1154	51	394	1474	60	3556	5	553	18,097		25,634	779	217.40
Norris	116	3052				58	2488	13	843	12,000		18,363		
Madison	18	144				105	3905	3	341	5,760		10,150		
Old Faithful	62	3719	31	92	2936	62	43450	8	271	28,514		78,890	841	356.35
West Thumb	30	1406				31	2983	10	585			4,974		
Fishing Bridge	30	1118	30	324	1283	31	16371	10	772	15,899		35,443	808	243.90
Canyon	58	1565	30	489	1653	112	18391	3	300			21,909		
Mount Washburn						1720	7264					5,864		
Totals 1932	698	23351	146	2825	10041	459	85211			77,886		196,489	2059	1195.90
Totals 1933	375	12138	122	2132	7346	2179	96408	52	3665	81,070		200,828	2428	817.65

General Memoranda:

Submitted: _____, 1933

Park Visitors During Period: 60,949

Signed: Arnax Bauer

Title Park Naturalist

B-1933 *Miscellaneous Contacts include short talks given at Artist and Inspiration Points and Mt. Washburn and are exclusive of other activities listed.

THERMAL ACTIVITY REPORT

JULY, 1934

MAMMOTH HOT SPRINGS

Angel Spring shows increased flow with water bubbling up eight inches high at main outlet. Flooded area on top of the terraces is spreading to the south.

Baby Spring is just bubbling at the outlet with no flow.

Blue Springs shows increasing activity at the west edge near Cupid's Cave. The overflow is increasing near Pulpit Terrace and the south side of Jupiter.

Cleopatra Terrace No change.

Cupid's Cave, Flow the same as last month.

Hymen Terrace Slight increase in flow.

Jupiter Terrace The flow has decreased.

Mound Terrace Increasing in flow.

Main Terrace. A beautiful pool has formed at the east end of this terrace.

Minerva Terrace Shows a decided increase in flow with two large basins overflowing to the south and north.

Palette Spring Flow the same as last month.

Opal Springs The new activity near the tennis court is increasing in beauty and deposition of travertine.

NORRIS BASIN

Constant Geyser Plays at an interval of almost exactly 1 hour and 30 seconds.

Ebony Geyser There have been 31 observed eruptions twice daily. Has an interval of between 8 and 10 hours.

Emerald Spring has been clear throughout the month and has been boiling over the entire surface the entire month.

Minute Man Geyser was observed in eruption almost continuously for 1 hour and 20 minutes. Interval seems very irregular from few observations made.

Steamboat Geyser has been unusually active, plays at intervals of about 15 minutes.

Valentine Geyser has been observed during eleven eruptions between the 3rd and 31st of July. Interval seems somewhat shorter than 24 hours and seems to move up somewhat each day.

Whirligig Geyser plays for an average time of 25 minutes. There are almost 1 hour and 30 minutes between starts of eruptions.

OLD FAITHFUL

Anemone Geyser The action is much the same as last year. The interval is about 30 minutes. The three little pools are completely drained after play.

Artemisia Geyser I have witnessed this geyser at play only twice this season although it plays frequently through the summer. It is spectacular because of the great volume of water ejected at time of eruption.

Beehive Geyser Has not played this season.

Cliff Geyser Has not been observed in eruption this season.

Daisy Geyser The average interval for the season to date is about 90 minutes. The geyser continues to be one of the truly beautiful marvels. It is observed each afternoon on the auto caravan. The action is made more interesting because of the water being drained into the geyser after play.

Giantess Geyser Has not played since December 7, 1932.

Giant Geyser Beautiful eruption took place July 25th. This geyser had not played since June 2nd. The height of eruption is well over 200 feet. The maximum height is maintained for about 10 minutes. Duration of play is about one hour and 55 minutes.

Grand Geyser The interval varied greatly all season and is from 15 to 52 hours. The play this year is of longer duration. The number of spurts are from 7 to 16. The height is frequently up to 200 feet.

Handkerchief Pool Sometime during the night of July 22nd the old vent became filled with water almost to its former size, and at present gives every indication of becoming its former self. For the past few

September 2, 1933

REPORT OF THE NATURALIST DEPARTMENT

AUGUST, 1933

I. CURRENT OPERATIONS

A. Public Contact

General Statement

August was a very busy month in which many special parties were met and either conducted through the park or advised on the best way to see Yellowstone. The evening programs at Canyon, Fishing Bridge and Old Faithful were especially well attended. Many favorable comments on the bear lecture given alternately by Senior Ranger Naturalist Lystrup and District Ranger Childs were received.

1. Guided Trips

1932	Guided Trips	[illegible]	Attendance	[illegible]
1933	Guided Trips	384	Attendance	13814

2. Lectures

1932	Lectures	482	Attendance	76137
1933	Lectures	1790	Attendance	78211

3. Auto Caravans

1932	Auto Caravans	156	Attendance	11409
1933	Auto Caravans	107	Attendance	6719

4. Special Parties

1932	Included in other activities			
1933	Parties	61	Attendance	3178

Among the visitors contacted were the following:

Special visitors and parties contacted by Mr. Bauer:

Assistant Director Harold C. Bryant, August 8-10 inclusive.

Convention of Equitable Life Insurance, managers and agents from Colorado, Utah, Idaho, Wyoming and Montana, August 12 - 13. 150 in party.

Coast to Coast Collegiate Tours, Inc. August 14 - 16. 180 in party

Miss Mollie G. Lamb, Special Representative, Union Pacific Railroad August 15 - 17.

International Geological Congress, August 16 - 22, 40 foreign geologists, 15 United States professors, and 30 graduate students. Among the foreign visitors of note should be mentioned:

Dr. Victor Van Straelen, Director du Musee Royal d'Histoire Naturelle.

Vice President Parc National Albert, 31 rue Vautier, Brussels, Belgium.

Sir Arthur Smith Woodward and Lady Woodward, London, England.

Dr. W. H. Collins, Geological Survey of Canada, Ottawa, Canada.

Professor Dr. Radim Nettner, Geologic Institute, Charles University, Albertov 6, Prague II, Czechoslovakia.

Dr. Carlos A. Marelli, La Plata, Buenos Aires, Argentina.

Dr. Rudolf Richter, Frankfurt am Eschersheim, Germany.

Professor G. Stefanini, Pisa, Italy.

Professor Tokuda, Tokio, Japan.

Leading American geologists in the park with the International Congress were:

Professor R. T. Chamberlin, University of Chicago.
" Walter Bucher, Cincinnati University.
" Douglass W. Johnson, Columbia University.
" W. Taylor Thom, Jr., Princeton University.
" R. M. Field, Princeton University.

Special visitors and parties contacted by Mr. Crowe:

College of Pacific (Geology), Stockton, California. 10 in party.
Boy Scouts, Champaign, Illinois, 18 in party.
4-H Club of Newdale Idaho. 19 in party.
Idaho Boy Scouts. 19 in party.
Transsylvania College. 38 in party.
Utah Scouts. 24 in party.
Alabama Y.M.C.A. 20 in party.
Scenic America Tour. 30 in party.
Ogden Boy Scouts. 160 in party.
Consolidated Film Industries (special service).
Fox Film Company (special service).
Geologic Congress
Omnibus College. 250 in party.
Parkhill Tours. 38 in party.
Professor Jonte , College Pacific, California.
Dr. Wm. Mcknight, New York.
Professor Carlson and Mrs. Carlson, (Geography), Dartmouth.
Dr. Bannerman, Dartmouth
Mr. & Mrs. Mueller (daughter of Cook of Folsom-Cook Expedition), Lewistown, Montana

Mr. & Mrs. George Lunt, Physical Director, Riverside Co., Calif.
Dr. Fred Keast of San Francisco.
Dr. Ballinger, Atlanta, Georgia.
Bishop Locke, Portland, Oregon. (M. E. Church.
The following visitors were members of the Yosemite Field School and were greatly interested in the naturalist work in Yellowstone:
Miss Myra Jones,'29, naturalist of Oakland schools, California.
Professor Durham,'33, Ross, California.
Natasha Smith, '32, Berkeley, California.
L. S. Arnold, '31, ranger naturalist of Glacier Park, Los Angeles.

Special visitors contacted by Mrs. Baggley:
Agnes Joyce Farnsworth, Riverton, Wyoming
Mr. & Mrs. Mueller (daughter of C. W. Cook) Lewistown, Montana.
Mr. Young, director Ogden scouts, and his assistant.
Mr. & Mrs. E. B. Andrews, Fort Collins, Colorado.
Mr. & Mrs. Sprague, Fort Collins, Colorado.
Professor & Mrs. R. E. Ford, Fort Collins, Colorado.
Mr. & Mrs. Carl A. Beacraft, Great Falls, Montana.
Mr. C. C. Howells, Fairbury, Nebraska. (Rode through park on horseback in 1883.).
Mr. Eaton, former senator, Denver, Colorado.

5. Museum

1932	Attendance	75979
1933	Atendance	76255

B. Ranger Naturalist Staff

The ranger naturalist staff for August and the time and place served are given below.

Herbert Lystrup, Old Faithful, August 1 to 28.
W. B. MacDougall, Mammoth, August 1 to 31.
Frank Oberhansley, Fishing Bridge, August 1 to August 28.
Harry W. Kelly, Chicago Century of Progress, August 1 to August 31.
E. T. Bodenberg, Norris Museum, August 1 to August 31.
Willis Smith, Madison Museum, August 1 to August 29.
Kenneth Agerter, Canyon, August 1 to August 31.
Trusten E. Peery, Old Faithful, August 1 to August 31.
David Condon, Mammoth, August 1 to August 31.
Dwight Smiley, Fishing Bridge, August 1 to August 11.
Arthur Nash, Mammoth, August 1 to August 28.
" " Old Faithful, August 28 to August 31.
Charles B. Hutchins, Fishing Bridge, August 1 to August 31.

Howard Stagner, Old Faithful, August 1 to August 12.
" " Fishing Bridge, August 13 to August 31.
Robert Spalding, Canyon, August 1 to August 26.
Thatcher Allred, Old Faithful, August 1 to August 20.
" " " " " 25
" " " " " 29 to August 31.
Edward M. Allen, Chicago Century of Progress, August 1 to August 31.
Ben Thompson, Wild Life Survey, August 1 to August 31.

C. Inspection Trips

Each member of the permanent staff has visited all points on the loop at least once each week during the month. Each ranger naturalist has been given at least three days relief from duty during the season. However, it is fully realized that this is by no means sufficient for best results. It is planned that next season one ranger naturalist may be assigned entirely to relief duty. With one man to help, the regular staff can relieve all ranger naturalists one day in ten.

At West Thumb the permanent ranger and a temporary ranger have guided visitors over the thermal basin there and given nightly talks at the campfire.

At Canyon and at Old Faithful the District Rangers have alternated with the ranger naturalists in giving the bear lectures at the bear feeding grounds each evening.

II. PERMANENT PROJECTS

A. Nature Notes

The July-August number of Nature Notes was mimeographed and mailed out to over 700 addresses. Members of the International Geological Congress each received a copy. Ranger naturalists were requested to submit articles and items of interest for Nature Notes.

B. Library

71 Library books in circulation.
15 Magazines and periodicals received.
16 Books and pamphlets received.
146 Books and pamphlets accessioned.

Mrs. Baggley spent two and one half days during the month accessioning books and pamphlets and re-arranging and filing pamphlets. All current books are now accessioned. A number of books in storage for a considerable time remain to be accessioned.

C. Museum Accessions

Mrs. Baggley spent four days in the museums out in the park checking and accessioning exhibits and two days on the same kind of work in Mammoth museum. An interesting accession acquired this month was the old bicycle received from W. O. Owen of Jackson, Wyoming. Mr. Owen rode this bicycle through the park in 1885. Other accessions received were: the pen used by President Coolidge in signing the act revising the park boundaries in 1929, sent by Mr. Albright; a very fine black obsidian scraper found by Shorty Cummins; a small white opal arrow point found by Wendell A. Chapman; a flying squirrel, to be mounted, accidentally killed and turned in by Walter Gammill.

D. Lantern Slides

45 new slides were received and catalogued.
82 slides were in circulation this month.

E. Museum Work

All museums were open during the entire month, except Madison which was closed on August 29th for the season. It became necessary to keep Old Faithful Museum open until after the illuminated eruption of the geyser each evening.

Dr. Russell continued the installation of "Field Exhibits" and other museum work until August 11th when he went to Mount Rainier National Park. The Dodge coupe used by Dr. Russell is property of Yellowstone Park loaned to him by the Naturalist Department.

Twenty Mode Wineman pictures, size 18" x 24", done in sepia were placed on exhibit in the entrance to the Mammoth Museum. These are covered with pyrex and framed in a light frame and mounted in a multiplex holder.

Some further planting was done in the Old Faithful patio garden and around the amphitheater. Also flowers and trees were planted around the Fishing Bridge Museum.

Live aquariums were kept at the Mammoth, Old Faithful, and Fishing Bridge museums, and a cut flower display was maintained at Mammoth and at Fishing Bridge.

F. Equipment

No new equipment was purchased this month.

G. Photographs

135 negatives were received, catalogued and filed, 101 of them are Grant negatives later to be returned to the Washington office.
142 prints were received, 120 of them have been labeled and pasted in the albums.
494 prints have been pasted in the albums this month.
191 negatives were in circulation during the month.

H. Sales Publications

Work in connection with sales publications occupied 11½ days of the Junior Park Naturalist's and [illegible] days of the stenographer's time.

I. Personnel

The Park Naturalist was on duty all month, except 1½ days on leave, administering and supervising the work of the department.

Assistant Park Naturalist Crowe spent more than half the month on relieving ranger naturalists and taking over their work. During the month he contacted and assisted 1[illegible] special parties and a large number of prominent individuals. He also made the usual observations on the Mammoth hot springs.

Junior Park Naturalist Bagley was out in the park a total of 13½ days and in Mammoth the remainder of the time. Her work consisted of 4½ days relief; reports and publications 11½ days; library and museum accessioning [illegible] days; desk duty and office routine 6½ days. 3 lectures were given and 3 nature walks conducted and numerous public contacts made.

Miss Antoinette Knaff has done the stenographic and clerical work for the department.

Mrs. Mary Miller spent five days in the Naturalist office working on photograph filing and labeling.

Wilfred Mead did the janitor work at the Mammoth Museum.

The Old Faithful Museum and the Fishing Bridge Museum were cared for by the same laborers as last month.

Respectfully submitted

C. Max Bauer
Park Naturalist

CC: Director
Dr. H. C. Bumpus
Ansel F. Hall and Dr. C. P. Russell

cc: Director
Dr. H. O. Bunge

SUMMARY OF NATURALIST ACTIVITIES

week
For month ending August 31, 1933 — Yellowstone National Park
season

Place	Field Trips No.	Field Trips Attendance	Auto Caravans No.	Auto Caravans No. Cars	Auto Caravans Attendance	Lectures No.	Lectures Attendance	Special Parties No.	Special Parties Attendance	Museum Attendance	* Misc. Contacts No.	Total Contacts Made 1933	Publications Distributed No.	Publications Distributed Sales $
Mammoth	108	2583	31	549	2126	59	3345	15	945	17871		23868	1091	275.60
Norris	117	3518				62	2981	5	335	12538		19372		
Madison	11	330				84	3428	10	484	6613		10755		
Old Faithful	43	3540	31	871	2907	61	31740	8	315	24271		62773	1023	448.70
West Thumb	28	1583				15	1063	12	544			3190		
Fishing Bridge	27	1039	26	228	893	31	9222	8	431	14962		26547	631	268.45
Canyon	51	1321	19	218	793	114	21715	3	126			23955		
Mount Washburn						1364	4717					4717		
Totals 1932	776	22310	156	2915	11409	482	76137			75979		185835	2468	1300.60
Totals 1933	384	13814	107	1366	6719	1790	76211	61	3178	76255		178177	2745	992.75

General Memoranda:

Submitted: _____, 1933

Park Visitors During Period: 50,777

Signed: Oliver Baker

Title Park Naturalist

B-1933 *Miscellaneous Contacts include short talks given at Artist and Inspiration Points and Mt. Washburn and are exclusive of other activities listed.

THERMAL ACTIVITY REPORT

AUGUST, 1933

MAMMOTH HOT SPRINGS

Angel Terrace - Deposition of travertine continues at a rapid rate with a new mound built up six inches about the outlet. Flow has increased over last month.

Baby Spring shows a slight increase in flow.

Blue Springs - On August 25th nearly all the water had disappeared from the basins after a heavy rain. A system of cracks opened on the west half of the formation showing the surface had settled six to ten inches. Pools are now filling up.

Cleopatra Terrace shows no change since last month.

Cupid's Cave shows an increase in flow and has built up about two inches at the outlet.

Glen Spring shows no change since last month.

Highland Terrace is inactive.

Hymen Terrace continues the same as last month with much less water than in the spring.

Jupiter Terrace - An increase in flow is shown in three new streams of water flowing down the terrace.

Main Terrace has increased in flow and built up a number of beautiful basins on the south side.

Minerva Terrace is far more active than a month ago. The overflow of water is seen on three sides. Brown algae is in evidence. There is a slow deposition of travertine.

Mound Terrace shows no change.

Opal Springs shows an increase in flow and beauty of algae and is spreading to the east.

Orange Spring Mound - Water is flowing over the entire west portion of the formation.

[illegible]

[illegible]

[illegible]

[illegible] - [illegible] has increased over last month.

[illegible] shows a slight [illegible] in flow.

[illegible] - On August 25th nearly all the water had disappeared from the basins after a heavy rain. A system of cracks opened on the west half of the [illegible] the surface has settled six to ten inches. Pools are now filling up.

Cleopatra Terrace shows no change since last month.

[illegible]'s Cave shows an increase in flow and has built up about two inches at the outlet.

Glen Spring shows no change since last month.

[illegible] is inactive.

[illegible] water than in the spring.

[illegible] - [illegible]

[illegible] Terrace has increased in flow and built up a number of beautiful basins on the south side.

[illegible] is far more active than a month ago. The overflow of water is seen on three sides. Brown algae is in evidence. There is a slow deposition of travertine.

[illegible] shows no change.

[illegible] shows no increase in flow and [illegible] is [illegible] to the north.

[illegible] - Water is flowing over the entire east portion of the [illegible].

Palette Spring shows increase in flow with rapid deposition of travertine over a wide area about the spring.

Pulpit Terrace shows some increase in flow.

The new spring between Devil's Kitchen and White Elephant Back Terrace is still increasing. Sulphur bacteria is present.

NORRIS BASIN

Bathtub Spring has developed unusual activity during the last few days of August. It plays to a height of 8 to 10 feet and is a milky, almost muddy, color.

Constant Geyser played on the usual 1½ minute interval all month until August 25th. This marked the time of our first real cold snap of the 1933 season. Since this date no sign of activity has been observed in the Constant. The water is warm, corresponding to the temperature of the stream of water draining into the crater, and a heavy growth of algae is already in evidence.

Ebony Geyser - The schedule has been about the same as during July. The interval has been about 5 to 6 hours with occasional short intervals of 3 hours; height about 50 ft; duration of eruption about 5 minutes.

Echinus Geyser - No observed eruptions. Boiling Violent.

Emerald Spring has been violently boiling throughout the month. At this date (August 31) it is crystal-clear and a beautiful emerald green.

Fan Geyser - This beautiful geyser, inactive all season until August 23rd, has since been giving some beautiful displays. Height about 30 feet and period of eruption 8 to 10 minutes. Intervals are irregular.

Fearless Geyser - Eruptions small and barely rising above the enclosed crater. Interval short.

Hillside Geyser - No observed eruptions.

Ledge Geyser - Steaming violent but no overflow. Level of lower pool slightly higher than during July.

[illegible] spring shows increase in flow with [illegible] of travertine over a wide area about the spring.

Pulpit Terrace shows some increase in flow.

The new spring between Devil's Kitchen and White Elephant Back Terrace is still increasing. Sulphur bacteria is present.

[illegible]

[illegible] spring has developed unusual activity during the last few days of August. It plays to a height of 5 to 10 feet and is a milky, almost [illegible], color.

[illegible] Geyser played on the usual 1½ minute interval all month until August [illegible]. This marked the time of our first real cold snap of the [illegible] season. Since this date no sign of activity has been observed in the [illegible]. The [illegible] is [illegible] to the temperature of the stream of water [illegible] from the [illegible], and a [illegible] growth of [illegible] is already in [illegible].

[illegible] Geyser - The schedule has been about the same as during July. The interval has been about 5 to 6 hours with occasional short intervals of 2 hours; height about 50 ft; duration of eruption about [illegible] minutes.

[illegible] Geyser - [illegible].

[illegible] spring has been violently boiling throughout the month. [illegible] it is crystal-clear and [illegible] emerald green.

[illegible] Geyser - This beautiful geyser, inactive all season until August [illegible], has since been giving some beautiful displays. Height about [illegible] feet and period of eruption 8 to 10 minutes. Intervals are irregular.

[illegible] Geyser - [illegible] small and barely rising above the [illegible]. [illegible].

[illegible] Geyser - [illegible] observed eruptions.

[illegible] Geyser - Steaming violent but no overflow. Level of lower [illegible] slightly higher than during July.

Minute Man Geyser - From observations and tourist reports, I estimate the present interval of the Minute Man to be about 3 hours, height 60 feet maximum and period of eruption 1 hour, 30 minutes maximum.

Monarch Geyser - There has been no activity.

Mud Geyser is not active other than violently steaming.

New Crater (Steamboat) Geyser - Interval, height and period of eruption the same as during July.

Pinwheel Geyser - No observed eruptions. Went dry.

Valentine Geyser has been unusually regular during the month of August. Interval 20 hours, height 100 feet during the first 15 minutes of eruption. Period, 2 hours.

Vixen Geyser- several eruptions seen - height about 25 feet. Interval irregular.

Whirligig Geyser - This geyser showed a striking shortening of the interval from 1 hour, 40 minutes early in the month to 1 hour, 30 minutes at the middle of the month to 1 hour, 15 minutes at the close of the month. The period of eruption has been approximately the same, namely, 20 minutes. Height 15 to 25 feet. The little geyser south of the Whirligig has been regularly following the Whirligig, starting 5 minutes after the latter and having the same interval.

OLD FAITHFUL

Beehive Geyser - To our knowledge, the Beehive has not played this season. A night watchman out here reports that it played one noon though it was not observed by rangers or ranger naturalists.

Cliff Geyser was observed in play on August 4th about 7:00 A.M. This play was the first observed this season. The play was watched by Dr. Brown, father-in-law of Ranger Childs.

Daisy Geyser - The average interval for the season of 1933 has been 90 minutes.

Giantess Geyser - The Giantess has not played during this summer season.

Giant Geyser On August 16th it played at 6:35 P.M. It was first sighted by Warren Theime, Missoula, Montana. The height was well over 200 feet, duration of play not definitely checked but it was still playing at 7:45 P.M.

Grand Geyser - The average interval for the season has been about 30 hours. The interval has varied between 18 and 40 hours. There have been more spurts per eruption than last year.

Handkerchief Pool still remains filled and apparently is rebuilding its cone. It does not as yet function well as a handkerchief pool but it has become much clearer.

Jewel Geyser remains very spectacular and reliable. It plays at intervals varying from 5 to 7 minutes.

Lone Star Geyser - The interval has been about three hours throughout the entire season.

Rainbow Pool - It is not as active nor does it play to as great a height as it did during July. It plays with great irregularity though one need remain only a short time to see it erupt.

Sunset Lake - For the past month foam has been noticed in the pool and around the edges. At first it was thought that Sunset Lake was soaped but the foam persists and it does not taste soapy. Whatever the nature of the bubbles they apparently do not interfere with the action of Sunset Lake.

WEST THUMB

There have no observations or changes in this area.

Observations by: George C. Crowe - Mammoth
E. T. Bodenburg - Norris
H. Lystrup - Old Faithful

[illegible] - The average interval for the season has been about [illegible] hours. The interval has varied between 16 and 30 hours. There have been more [illegible] per eruption than last year.

[illegible] Pool still remains filled and apparently is [illegible] the same. It does not as yet function well as a handkerchief pool but it [illegible] much cleaner.

[illegible] remains very spectacular and reliable. It plays at intervals [illegible] from 5 to 7 minutes.

[illegible] - The [illegible] has been about three hours throughout the active season.

[illegible] - It is not as active nor does it play to as great a [illegible] during July. It plays with great irregularity though [illegible] only a short time to see it erupt.

[illegible] Lake - For the past month foam has been noticed in the pool [illegible]. At first it was thought that Sunset Lake was [illegible] and it does not taste soapy. Whatever the nature of the bubbles they apparently do not interfere with the [illegible] of Sunset Lake.

There have no observations of changes in this area.

Observations by: George C. [illegible] - [illegible]
L. [illegible] - Morris
[illegible] - Old Faithful

OFFICE OF NATIONAL PARKS, BUILDINGS, AND RESERVATIONS

October 3, 1933

REPORT OF THE NATURALIST DEPARTMENT

September, 1933

I. CURRENT OPERATIONS

A. Public Contact

General Statement

There seemed to be a very sudden dropping off of visitors after Labor Day and again on September 14 due to a heavy rain. Three of the museums were kept open until September 18, and the usual activities carried on so far as the limited help would permit.

1. Guided Trips

1932	Guided trips	289	Attendance	4915
1933	" "	128	"	2110

2. Lectures

1932	Lectures	149	Attendance	8061
1933	"	620	"	8650

3. Auto Caravans

1932	Auto Caravans	42	Attendance	570
1933	" "	40	"	799

4. Special Parties

1932	Included in other activities			
1933	Parties	7	Attendance	273

(copies of the seasonal and monthly reports are appended)

Among the special visitors contacted by members of the Naturalist Staff were:

C. Frank Brockman, Park Naturalist of Rainier National Park, and small son who entered the park September 15, remaining until September 17

C. A. Harwell, Park Naturalist of Yosemite National Park entered Yellowstone Wednesday evening, September 20, remaining until the morning of September 25.

Prof. A. N. Winchell and son of Wisconsin University visited the park on September 1 to 3.

Rev. Powell and party of Livingston were in the park September 18.

Prof. Esper S. Larsen of Harvard University had a group of six geology students in the park during the month.

Mr. and Mrs. P. L. Naismith visited the park during the forepart of the month. Mr. Naismith is chairman of the Board of Directors of the Canadian Pacific Railroad.

Dr. and Mrs. Frank H. Oastler of New York City spent more than two weeks in Yellowstone.

5. Museum

1932	Attendance	28190
1933	"	26206

B. Ranger Naturalist Staff

The ranger naturalists serving in September are listed below:

N. B. McDougall, Mammoth, September 1 to 18
E. T. Bodenberg, Norris, September 1 to 4
Kenneth S. Agerter, Canyon, September 1 to 5
Norris, September 6 to 13
Trustan E. Peery, Old Faithful, September 1 to 18
Arthur H. Nash, Old Faithful, September 1 to 17
David deL. Condon, Mammoth, September 1 to 18
Howard Stagner, Fishing Bridge, September 1 to 18
Charles B. Hutchins, Fishing Bridge, September 1 to 18
Thatcher Allred, Old Faithful, September 1 to 4

C. Inspection Trips

Inspection trips were carried on regularly by members of the permanent staff.

Park Naturalist Bauer accompanied Park Naturalist Harwell to Pocatello on September 25, returning via Craters of the Moon National Monument on September 26.

II. PERMANENT PROJECTS

A. Nature Notes

A request was made of all ranger naturalists to turn in one or more nature notes. One-half day has been spent this month on editorial work for the next issue. It is planned to continue the

C. A. Harwell, Park Naturalist of Yosemite National Park entered Yellowstone Wednesday evening, September 22, remaining until the morning of September 25.

Prof. A. R. Kimball and son of Kimmaid University visited the park on September 1 to 3.

Rev. Powell and party of Livingstone were in the park September 23.

Prof. Roger E. Greene of Harvard University and a group of six geology students in the park during the month.

Dr. and Mrs. T. L. Naismith visited the park during the forepart of the month. Mr. Naismith is chairman of the Board of Directors of the Canadian Pacific Railroad.

Dr. and Mrs. Frank R. Gaetler of the Fort Wiley Bank spent about two weeks in Yellowstone.

D. Summer

[illegible]	Attendance	Rating
[illegible]	"	[illegible]

E. Ranger Naturalist Staff

The ranger naturalists serving in September are listed below:

C. R. Hammgall, Gamnock, September 1 to 18
E. T. Rodenberg, Gerrie, September 1 to 4
Kenneth M. Agerter, Gerrie, September 1 to 3
Gerrie, September 2 to 17
Trusian R. Peary, Old Faithful, September 1 to 18
Arthur R. Ebbs, Old Faithful, September 1 to 17
David Gal, Canyon, Canyon, September 2 to 16
Howard Stagner, Fishing Bridge, September 1 to 18
Charles R. Hutchins, Fishing Bridge, September 1 to 19
Thatcher Allred, Old Faithful, September 1 to 4

C. Inspection Trips

Inspection trips were carried on regularly by members of the permanent staff.

Dean Naturalist Trust accompanied Park Naturalist Harwell to Fountain on September 22, returning via Craters of the Moon National Monument on September 24.

II. Personnel Training

A. Nature Notes

I request the aids of all ranger naturalists to help in one or more nature notes. One-half day has been spent this month on editorial work for the next issue. It is planned to continue the

plan adopted this year of confining the material to one subject. The next issue will be on Bears.

B. Library

51 Library books in circulation
10 Books and pamphlets received, accessioned, and filed
16 Magazines and periodicals received and filed

The work of mending the Ranger Naturalist Manuals was commenced. There are many of the old manuals which will need rebinding.

C. Museum Accessions

Eight days were spent on the final checking and cataloging of the Norris, Fishing Bridge, and Old Faithful Museums. Both ranger naturalists and the caretaker assisted Mrs. Bagley at Fishing Bridge and two assisted at Norris and Old Faithful Museums. These three museums are now completely cataloged and it is hoped to complete all records this winter. Four days were spent on the museum records and the accessioning and cataloging of new material and old materials heretofore uncataloged.

Among museum gifts received this month are the following:

Small framed photograph of General O. O. Howard
Picture of portraits of twenty of Montana's leading pioneers, several of whom were influential in park history and development.
Signatures of the geologists and others left on top of Hay Stack Peak, a triangulation point north of the park.
Quartz geode found near Oxbow Creek

D. Lantern Slides

822 slides in circulation
35 slides repaired
210 slides shellaced

This completes the shellacing of all slides; work which was commenced last spring. This preserved the slides so well from the constant wear given them during the season that only a very few needed repair this fall as compared to former seasons. Six slides were broken during the season and will need to be replaced. All slides are now in readiness for next season.

E. Museum Work

Madison Museum was not open this month because of insufficient help.
Norris Museum was open daily from 8:00 a.m. to 5:00 p.m. until the close of September 15.

plan adopted this year of modifying the material in one subject. The next issue will be on Hearts.

B. Library

[illegible] library books in circulation
[illegible] books and pamphlets received, accessioned, and filed
[illegible] magazines and periodicals received and filed

The work of mending the Bangor Universities [illegible] has commenced. There are many of the all [illegible] which will need rebinding.

C. Bangor Universities

Eight days were spent on the final checking and cataloging of the Bangor, Fishing Bridge, and [illegible] Universities. Both Bangor Universities and the [illegible] [illegible] [illegible], [illegible] at Fishing Bridge and the [illegible] at Bangor and [illegible] [illegible]. These three museums are now completely cataloged and it is hoped to complete all records this winter. Four days were spent on the [illegible] records and the accessioning and cataloging of new [illegible] and all [illegible] barometers uncataloged.

Among museum gifts received this month are the following:

Small frame photograph of [illegible] [illegible] [illegible]
Picture of [illegible] of [illegible] of [illegible] leading pioneers, [illegible] of [illegible] were influential in park history and development.
Signatures of the [illegible] and others left on top of Day Beach Bank, a triangulation point north of the park.
[illegible] [illegible] [illegible] [illegible] [illegible]

D. Lantern Slides

[illegible] slides in circulation
[illegible] slides repaired
[illegible] slides [illegible]
This completes the [illegible] of all slides; [illegible] [illegible] [illegible] [illegible] last spring. This preserved the slides so well from the [illegible] [illegible] given them during the season that only a [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]. [illegible] slides [illegible] during the season and will need to be replaced. All slides are now in [illegible] for next season.

E. Museum Part

[illegible] [illegible] was not open this month because of [illegible] [illegible] help.
[illegible] [illegible] was open daily from [illegible] a.m. to [illegible] p.m. until the close of September 15.

Mammoth and Fishing Bridge Museums were open each day from 8:00 a.m. to 8:00 p.m. until the close of September 18. Old Faithful Museum was open each day from 8:00 am until the illuminated eruption (the first eruption after 9:00 p.m.) as long as Old Faithful Inn remained open this season.

All cases at Madison, Fishing Bridge, and Old Faithful Museums were thoroughly cleaned when the final checking and cataloging was done this month. With the exception of a few revisions, all cases in these museums are in readiness for next season's opening of the museums.

F. Equipment

one-half dozen small exhibit bottles, inverted type

G. Photographs

52 new negatives were received and cataloged; 28 of these were labeled but not pasted
35 duplicate prints received and filed
185 negatives in circulation

H. Sales Publications

Six and a half days, with the help of the secretary were devoted to the balancing and closing of the publications accounts, transfer of books, and reports. Four additional days were spent on copying the reports and preparing the seasonal reports. All reports, both sales publications and activities, have been prepared in the Naturalist office this season as there was no statistical help available. (Seasonal reports are attached herewith)

I. Personnel

Park Naturalist Bauer, Assistant Park Naturalist Crowe, and Stenographer Clerk Knaff and Janitor Mead were on duty all month. Junior Park Naturalist Baggley was on sick leave 1 day and annual leave ½ day. Verge Watson, caretaker at Fishing Bridge Museum was on duty from September 1 to 20. Victor Lunt, caretaker at Old Faithful Museum, was on duty from September 1 to 16. On this date he had a fall and was taken to the hospital. He returned to Old Faithful on September 19, but did not return to duty.

Respectfully submitted

C. Max Bauer
Park Naturalist

CC: Superintendent
Director
Bumpus
Hall and Russell
Museum

Museum and Fishing Bridge Museum were open each day from 8:00 a.m. to 6:00 p.m. until the close of September 12. One Faithful Museum was open each day from 8:00 am until the illuminated drapings (the first drapings after 8:00 p.m.) as long as the Faithful Inn remained open this season.

All tables at Lakeside, Fishing Bridge, and the Faithful Museum were thoroughly cleaned when the final drapings and tailings was done this month. With the exception of a few positions, all tables in these museums are in publicness for most concrete spacing of the museum.

F. Equipment

One-half dozen small exhibit bottles, inverted type

G. Photographs

[illegible] new negatives were received and catalogued; [illegible] of these were labeled but not posted
[illegible] duplicate prints received and filed
[illegible] negatives in circulation

H. Sales Publications

Six and a half days, with the help of the secretary were devoted to the balancing and closing of the publications are sounds, transfer of texts, and reports. Some additional days were spent on copying the reports and preparing the seasonal reports. All reports, both sales publications and activities, have been prepared in the Naturalist office this season as there was no statistical help available. (Seasonal reports are attached herewith)

I. Personnel

Park Naturalist Maher, Assistant Park Naturalist Drum, and Stenographer Clark Knoff and Janitor Hood were on duty all month. Junior Park Naturalist Baggley was on sick leave 1 day and annual leave 3 day. Verde Nelson, secretary at Fishing Bridge Museum was on duty from September 2 to [illegible]. Tister Lark, secretary at the Faithful Museum, was on duty from September 1 to 14. On this date he had a fall and was taken to the hospital. He returned to the Faithful on September 15, but did not return to duty.

Respectfully submitted

[illegible]
L. [illegible]
Park Naturalist

Mr. Superintendent
Director
Temple
Hall and Russell
Museum

THERMAL ACTIVITY REPORT

SEPTEMBER, 1933

MAMMOTH HOT SPRINGS

Dark brown and green shades of algae predominate over the terraces due to cooler weather of fall.

Angel Terrace shows the greatest deposition of travertine for the month. A new mound about the spring started in August and has built up a foot in height and 4 feet in diameter. Four outlets are flowing freely just below the mound. On the lower slope the flow has extended over a foot to the south. Water is seeping from the old crack on the upper slope which was active eighteen months ago.

Baby Spring - slight seepage.

Blue Springs - gradual increase in flow during the month. Area two-thirds covered with water.

Cleopatra Terrace shows no change.

Hymen Terrace - increase in flow early in the month.

Main Terrace shows a decided increase and is now flowing down the north slope. A number of old basins have been reclaimed on south slope.

Mound Terrace - slight increase in flow during the month.

Minerva Terrace showed a marked increase about the middle of the month. Several basins on the southeast side are filled with water but no algae is in evidence. Old basins are refilling on top to the northwest. Dark brown and green algae colors all the upper pools. Very little travertine is being deposited.

Opal Springs is decreasing in flow.

Palette Spring has decreased in flow during the month.

White Elephant Back Terrace shows seepage at four points.

The new spring near White Elephant Back Terrace is increasing in flow forming minature basins on the slope and a pool two feet deep and twelve feet in diameter has formed

NORRIS BASIN

Constant Geyser ceased activity on August 25th but resumed eruptions September 10th at 3:00 p.m.; intervals thereafter were 5 - 15 minutes.

Echinus Geyser - no eruptions observed during the season.

Fan Geyser continued to erupt during September.

Fearless Geyser has had occasionally small eruptions during the season with much steam and boiling.

Hillside Geyser - no observed eruptions during the season.

Ledge Geyser - no observed eruptions during the season.

Minute Man Geyser has continued to erupt throughout the month but there have been no observations on intervals.

Mud Geyser show no change.

New Crater (Steamboat) Geyser - no observations made during September.

Valentine Geyser - no observations for September.

Vixen Geyser - no observations for September.

Whirligig Geyser - no change.

OLD FAITHFUL

Beehive Geyser was observed in eruption by those stationed at Old Faithful on September 19th at 6:25 p.m. Preceding its eruption there was a terrific roar with considerable steam. The height was about 165 feet. There was no wind at time of eruption. This geyser had been reported in eruption twice before during the season but had not been observed by rangers or ranger naturalists for two years.

Giant Geyser has been observed each month during the season on the following dates: June 2, July 25, August 19 and September 7. On September 7 it was observed at 4:55 p.m. The height was well over 200 feet which was reached in a few seconds. The duration was well over an hour. It had boiled violently all day often splashing over the cone.

Activity in the Black Sand Basin is gradually quieting down after a very active season.

WEST THUMB

There have no observations of changes in this area.

Observations by; George C. Crowe - Mammoth
K. Agerter - Norris
F. Childs - Old Faithful

[illegible]

[illegible] Geyser caused activity on August 25th but resumed eruptions September 15th at 5:00 p.m.; intervals thereafter were 5 - 18 minutes.

[illegible] Geyser - no eruptions observed during the season.

[illegible] Geyser continued to erupt during September.

[illegible] Geyser has had occasionally small eruptions during the season with much steam and boiling.

[illegible] Geyser - no observed eruptions during the season.

Lodge Geyser - no observed eruptions during the season.

[illegible] Geyser has continued to erupt throughout the month but there have been no observations on intervals.

[illegible] Geyser [illegible] no change.

[illegible] Geyser - no observations made during September.

[illegible] Geyser - no observations for September.

[illegible] Geyser - no observations for September.

[illegible] Geyser - no change.

[illegible]

[illegible] Geyser was observed in eruption by [illegible] at [illegible] on September [illegible] at [illegible] p.m. Preceding its eruption there was a terrific roar with considerable steam. The height was about [illegible] feet. There was no [illegible] at time of eruption. This geyser had been reported in eruption [illegible] before during the season but had not been observed by rangers or ranger naturalists for two years.

[illegible] Geyser has been observed east [illegible] during the season on the following dates: June 2, July 25, August 19 and September 7. On September 7 it was observed at [illegible] p.m. The height was well over [illegible] feet which was reached in a few seconds. The duration was well over an hour. It had boiled violently all day often splashing over the cone.

Activity in the Black Sand Basin is gradually quieting down after a very active season.

[illegible]

There have no observations of changes in this area.

Observations by: George C. Crowe - Mammoth
E. Agenter - Norris
F. Childs - Old Faithful

Yellowstone National Park
September 1933

	EMPLOYEES		GUIDED TRIPS										LECTURES										MUSEUM VISITORS	LIBRARY		LECTURES OUTSIDE PARK		TOTAL CONTACTS	TOTAL NUMBER VISITORS	PERCENT CONTACTED	BROADCAST	
			AUTO CARAVANS			HIKING		HORSEBACK		Special Boat Trips		TOTAL	CAMPFIRE		LODGE		MUSEUM		BEAR		TOTAL											
	MAINT	TEMP	No	No Cars	Att'd.	No	Att'd.	No	Att'd.	No	Att'd	No	No	Att'd.	No	Att'd.	No	Att'd.	No	Att'd.	No	Att'd	Number	No Loans	No Contacts	No	Att'd				Station	No
Mammoth	3	2	17	113	367	52	614			3	125	72	1106	5	100	5	87	6	88			16	275	3755					4736				
Norris Museum		1				32	544			1	24	33	56					21	542			21	542	2496					3606				
Madison Museum																																
Old Fort Museum		3	15	111	352	16	485			2	120	32	957	17	2076					11	2625	28	4701	5794					11,452				
Upper Thumb Geyser		1				13	334			1	4	14	338																338				
Fishing Bridge Museum		2	8	24	80	12	114					20	194	17	937							17	937	2729									
Canyon Station		1				4	19					4	19			4	430	4	625	*		8	1055						1074				
Mount Haynes																		530	1140	*		530	1140						1140				
Total for month	3	11	40	248	799	128	2110			7	273	175	3182	22	2176	9	617	678	3332	11	2625	620	8650	14374					26206				

* Contacts at Inspiration and Artist Point, talked to groups

	EMPLOYEES		GUIDED TRIPS										LECTURES								MUSEUM VISITORS	LIBRARY		LECTURES OUTSIDE PARK		TOTAL CONTACTS	TOTAL NUMBER VISITORS	PERCENT CONTACTED	BROADCAST	
			AUTO CARAVANS			HIKING		HORSEBACK		Special Auto Parties		TOTAL	AUDITORIUM		LODGE		MUSEUM		BEAR		TOTAL									
	PERMANENT	TEMPORARY	No	No Cars	Att'd	No	Att'd	No	Att'd	No	Att'd				No	Att'd	No	Att'd	No	Att'd	No	Att'd		No Loans	No Contacts	No	Att'd				Station
Mammoth Museum	3	3	94	1191	4478	242	4533			24	1690	360	10701	75	5007	77	3019	6	88			158	8116	44912					63729			
Norris Museum		1*				299	7614			19	1202	318	8816					150	6173			150	6173	29572					44561			
Madison Museum		1*				29	374			13	825	42	1199	52	2314			140	5096			192	7410	12403					21012			
Old Faithful Museum		4	90	2164	7087	143	8440			21	822	254	16349	92	35197					80	48725	172	83922	67379					167650			
West Thumb Station		*				82	3622			28	1201	110	4830	55	4323							55	4323						9153			
Fishing Bridge Museum		3	77	667	2597	82	2506			18	1203	177	6306	92	30057							92	30057	37741					74104			
Lake Station		2*	69	841	2930	136	3242			8	647	213	6821			79	13164	139	4718	44	12740	252	43089						49410			
Mount Washburn Station		*								1	22	1	22					2687	11305			3687	11305						11327			
Total for season	3	14	330	4863	17092	1013	30331			132	7621	1475	55044	366	76900	156	16183	4	9847	124	61465	4758	194395	192007					441			

* Contacts on talks to groups at Inspiration and Artist points.

*2 Contacts on talks to groups.

SUMMARY OF NATURALIST ACTIVITIES

For week / month / season ending September 16, 1933

Yellowstone National Park

Place	Field Trips No.	Field Trips Attendance	Auto Caravans No.	Auto Caravans No. Cars	Auto Caravans Attendance	Lectures No.	Lectures Attendance	Special Parties No.	Special Parties Attendance	Museum Attendance	* Misc. Contacts No.	Total Contacts Made 1933	Publications Distributed No.	Publications Distributed Sales $
Mammoth	33	614	17	113	367	16	172	3	125	3355		4735	257	46.30
Norris	32	544				21	54[illegible]	1	24	2496		3606		
Madison														
Old Faithful	15	485	15	111	352	28	4701	2	120	5794		11452	213	74.25
West Thumb	13	334						1	4			338		
Fishing Bridge	12	114	8	24	80	17	937			2729		3860	92	37.25
Canyon	4	19				8	1055					1074		
Mount Washburn						530	1140					1140		
Totals 1932	289	4915	42	102	570	149	8061			14644		28190	456	182.75
Totals 1933	128	2110	40	~~430~~ 248	799	620	8650	7	273	14374		26206	362	157.80

General Memoranda:

Submitted: _____, 1933

Park Visitors During Period: 15,054

Signed: Omax Bauer

Title

B-1933 *Miscellaneous Contacts include short talks given at Artist and Inspiration Points and Mt. Washburn and are exclusive of other activities listed.

SUMMARY OF NATURALIST ACTIVITIES

For ~~week~~ ~~month~~ season ending September 18, 1933

Yellowstone National Park

Place	Field Trips No.	Field Trips Attendance	Auto Caravans No.	Auto Caravans No. Cars	Auto Caravans Attendance	Lectures No.	Lectures Attendance	Special Parties No.	Special Parties Attendance	Museum Attendance	* Misc. Contacts No.	Total Contacts Made 1933	Publications Distributed No.	Publications Distributed Sales $
Mammoth	242	4533	94	1191	4478	158	8116	24	1690	44912		63,729	2341	601.75
Norris	299	7614				150	6173	19	1202	29572		44,561		
Madison	29	374				192	7410	13	325	12403		21,012		
Old Faithful	143	8440	90	2164	7087	172	83922	21	822	67379		167,650	2218	922.95
West Thumb	82	3622				55	4323	28	1208			9,153		
Fishing Bridge	82	2506	77	667	2597	92	30057	18	1203	37741		74,104	1726	617.95
Canyon	136	3242	69	841	2930	252	43089	8	649			49,910		
Mount Washburn						3687	11305	1	22			11,327		
Totals 1932	1921	54615	383	6501	24259	1217	185256			189946		454,076	5385	2871.90
Totals 1933	1013	30331	330	~~5045~~ 4863	17092	4758	194395	132	7621	192007		441,446	6285	2142.65

General Memoranda:

Submitted: _____, 1933

Park Visitors During Period: 160,086

Signed: _____

Title

B-1933 * Miscellaneous Contacts include short talks given at Artist and Inspiration Points and Mt. Washburn and are exclusive of other activities listed.

PUBLICATIONS REPORT

PUBLICATION		1932 Sale No.	1933 Br't F'r'd. No.	Br't F'r'd. Value	Received No.	Received Value	Total No.	Total Value	Sales No.	Sales Value	Balance No.	Balance Value
Bulletin A-611	$ 1.00		5	5.00	-	---	5	5.00	1	1.00	4	4.00
Bulletin B-612	1.00		[illegible]									
Conservation in Dept. Int.	1.00		[illegible]									
Fauna of the Nat'l Parks	.20		10	[illegible]								
Fishes	.05		[illegible]									
Fossil Forests	.10		[illegible]									
Geysers	.10		[illegible]									
Geological History	.10		[illegible]									
Portfolios	1.00		175	175.00			175	175.00	105	105.00	70	70.00
U.S.G.S. Map (Y.N.P.)	.25		25	6.25	50	12.50	75	18.75	70	17.50	-	---
U.S.G.S. Map (G.T.N.P.)	.10		25	2.50	-	---	25	2.50	7	.70	18	1.80
TOTAL GOVERNMENT			948	283.75	145	28.80	1093	312.55	337	195.90	851	95.30
American Antelope	.25		15	3.75	-	---	15	3.75	5	1.25	10	2.50
Animal Life	2.50		5	12.50	-	---	5	12.50	2	5.00	3	7.50
Bears of Yellowstone	1.25		5	6.25	5	6.25	10	12.50	6	7.50	4	5.00
Birds - Skinner	1.00		10	10.00	-	---	10	10.00	4	4.00	1	1.00
Chittenden Y.N.P.	3.00		10	30.00	4	12.00	14	42.00	12	36.00	2	6.00
Cubby in Wonderland	1.00		10	10.00	35	35.00	50	50.00	47	47.00	3	3.00
Haynes Guide Book	.50		25	12.50	45	22.50	70	35.00	68	34.00	2	1.00
Haynes Guide Book-Deluxe	1.00		5	5.00	-	---	5	5.00	1	1.00	4	4.00
James Bridger	12.50											
Jo Mora Maps	.50		25	12.50	25	12.50	50	25.00	44	22.---	6	3.00
Langford's Discovery	.75		10	7.50	5	3.75	15	11.25	9	6.75	6	4.50
Langford's Discovery-Deluxe	1.50		3	4.50	2	3.00	5	7.50	4	6.00	1	1.50
Nature Book	1.25		10	12.50	-	---	10	12.50	10	12.50	-	---
Oh, Ranger!	1.00		100	100.00	-	---	100	100.00	40	40.00	-	---
Poems of Nature-Wild Life	1.50		5	7.50	-	---	5	7.50	1	1.50	4	6.00
Trailside Notes	.10		50	5.00	1150	115.00	1200	120.00	1141	114.10	59	5.90
Trees and Flowers	.50		25	12.50	54	27.00	79	39.50	75	37.50	4	2.00
Trees and Shrubs (Paper)	.35		10	3.50	-	---	10	3.50	6	2.10	4	1.40
Trees and Shrubs (Board)	.50		5	2.50	-	---	5	2.50	4	2.00	1	.50
Wilderness Neighbors	1.25		50	62.50	-	---	50	62.50	5	6.25	45	56.25
TOTAL MISCELLANEOUS			358	326.50	1325	237.00	1706	563.50	1404	405.95	157	104.05
GRAND TOTAL			1306	609.25	1470	265.80	2801	874.05	2341	601.75	460	199.85

Form c - 1933

Returned for credit during the season: U.S.G.S. Map Y.N.P. 1 $ 1.25
Animal Life 1 2.50
Birds 1 1.00
Oh, Ranger 1 1.00
Poems (Price reduced) 1 1.50

[illegible] MUSEUM

day
week
For: month ending [illegible], 1933
season

STATEMENT OF CASH ACCOUNT

Br't F'r'd..... $ [illegible]

Cash Sales..... $ [illegible]
Total $ [illegible]

Remitted..... $ [illegible]

Balance on Hand..... $ [illegible]

STATEMENT OF ACCOUNT WITH YELLOWSTONE LIBRARY & MUSEUM ASSOC.

Br't F'r'd..... $ [illegible]

Value of Issues..... $ [illegible]
Total $ [illegible]

Cash Remitted..... $ [illegible]
Balance of accountability..... $ [illegible]
Books returned for credit (June 17 to Sept. 18) [illegible]
Signed [illegible]

(Title)

PUBLICATIONS REPORT

PUBLICATION		1932 Sale	1933 Br't F'r'd.		Received		Total		Sales		Balance	
		No.	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value
Bulletin A-611	$ 1.00											
Bulletin B-612	1.00											
Conservation in Dept. Int.	1.00											
Fauna of the Nat'l Parks	.20											
Fishes	.05											
Fossil Forests	.10											
Geysers	.10											
Geological History	.10											
Portfolios	1.00											
U.S.G.S. Map (Y.N.P.)	.25											
U.S.G.S. Map (G.T.N.P.)	.10											
TOTAL GOVERNMENT												
American Antelope	.25											
Animal Life	2.50											
Bears of Yellowstone	1.35											
Birds - Skinner	1.00											
Chittenden Y.N.P.	3.00											
Cubby in Wonderland	1.00											
Haynes Guide Book	.50											
Haynes Guide Book-Deluxe	1.00											
James Bridger	12.50											
Le Moro Love	.50											
Langford's Discovery	.75											
Langford's Discovery-Deluxe	1.50											
Nature Book	1.25											
Oh, Ranger!	1.00											
Pocket of Nature-Wild Life	1.50											
Trailside Notes	.10											
Trees and Flowers	.50											
Trees and Shrubs (Paper)	.35											
Trees and Shrubs (Board)	.50											
Wilderness Neighbors	1.25											
TOTAL MISCELLANEOUS												
GRAND TOTAL												

Form c - 1933

_____ MUSEUM

day
week
For: month ending _____, 1933
season

STATEMENT OF CASH ACCOUNT

Br't F'r'd..... $_____

Cash Sales..... $ 922.95
Total $ 922.95

Remitted..... $ 922.95

Balance on Hand..... $_____

STATEMENT OF ACCOUNT WITH
YELLOWSTONE LIBRARY & MUSEUM ASSOC.

Br't F'r'd..... $_____

Value of Issues..... $ 1087.90
Total $ 1087.90

Cash Remitted..... $ 922.95
Balance of
accountability..... $ 164.95
Books returned for credit 7.50
(June 17 to Sept. 18)
Signed _____

_____
(Title)

PUBLICATIONS REPORT

PUBLICATION		1932 Sale No.	1932 Br't F'r'd. No.	1932 Br't F'r'd. Value	1932 Received No.	1932 Received Value	1933 Total No.	1933 Total Value	1933 Sales No.	1933 Sales Value	1933 Balance No.	1933 Balance Value
Bulletin A-611	$ 1.00						3	[illegible]	2	2.00	1	[illegible]
Bulletin B-612	1.00						2	[illegible]	1	1.00	1	[illegible]
Conservation in Dept. Int.	1.00						2	[illegible]	1	1.00		
Fauna of the Nat'l Parks	.20					[illegible]	[illegible]	[illegible]	[illegible]	4.40		
Fishes	.08					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
Fossil Forests	.10					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Geysers	.10					[illegible]	[illegible]	[illegible]	256	[illegible]	[illegible]	[illegible]
Geological History	.10					[illegible]	[illegible]	[illegible]	319	[illegible]	[illegible]	[illegible]
Portfolios	1.00					[illegible]	[illegible]	[illegible]	173	173.00	[illegible]	[illegible]
U.S.G.S. Map (Y.N.P.)	.25					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
U.S.G.S. Map (G.T.N.P.)	.10						[illegible]	[illegible]	4	[illegible]	[illegible]	[illegible]
TOTAL GOVERNMENT						[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
American Antelope	.25						[illegible]	[illegible]	6	1.50	4	[illegible]
Animal Life	2.50					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Bears of Yellowstone	1.25						[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Birds - Skinner	1.00					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Chittenden Y.N.P.	3.00					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Cubby in Wonderland	1.00					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Haynes Guide Book	.50					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Haynes Guide Book-Deluxe	1.00					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
James Bridger	12.50											
Jo Mora Book	.50						[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Langford's Discovery	.75						[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Langford's Discovery-Deluxe	1.50						[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Nature Book	1.25						[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Oh, Ranger!	1.00					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
Poems of Nature-Wild Life	1.50						[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trailside Notes	.10					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trees and Flowers	.50					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trees and Shrubs (Paper)	.35					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Trees and Shrubs (Board)	.50					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Wilderness Neighbors	1.25						[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
TOTAL MISCELLANEOUS					[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
GRAND TOTAL					[illegible]	[illegible]	[illegible]	746.40	[illegible]	617.95	288	110.45

Form c - 1933

[illegible] during the season: Conservation 1 $ 1.00
Cubby in Wonder-land 15 15.00
(Price reduced) Poems 4 2.00

[illegible] MUSEUM

day
week
For: month ending [illegible], 1933
season

STATEMENT OF CASH ACCOUNT

Br't F'r'd..... $_____

Cash Sales..... $[illegible]
Total $617.95

Remitted..... $[illegible]

Balance on Hand..... $_____

STATEMENT OF ACCOUNT WITH YELLOWSTONE LIBRARY & MUSEUM ASSOC.

Br't F'r'd..... $_____

Value of Issues..... $746.40
Total $746.40

Cash Remitted..... $617.95
Balance of accountability..... $128.45

Books returned for credit 18.00
(June 17, to Sept. 18) $ 110.45

Signed_____

(Title)

PUBLICATIONS REPORT

PUBLICATION	Sale	1932 Br't F'r'd.		Received		1933 Total		Sales		Balance	
	No.	No.	Value	No.	Value	No.	Value	No.	Value	No.	Value
Bulletin A-611 $ 1.00		13	13.00	1	1.00	13	13.00	3	3.00	10	10.00
Bulletin B-612 1.00		12	12.00	3	3.00	15	15.00	6	6.00	9	9.00
Conservation in Dept. Int. 1.00		7	7.00	2	2.00	9	9.00	7	7.00	1	1.00
Fauna of the Nat'l Parks .20		25	5.00	56	11.2	81	16.20	21	4.20		
Fishes .05		300	15.00	194	9.70	494	24.70	494	24.70		
Fossil Forests .10		350	35.00	350	35.00	700	70.00	470	47.00	230	23.00
Geysers .10		800	80.00	450	45.00	1080	105.00	969	97.70	111	11.30
Geological History .10		500	50.00	525	52.50	1025	102.50	955	96.50	80	8.00
Portfolios 1.00		325	325.00	340	340.00	665	665.00	574	574.00	91	91.00
U.S.G.S. Map (Y.N.P.) .25		75	18.75	166	41.50	241	60.25	236	59.00		
U.S.G.S. Map (G.T.N.P.) .10		80	8.00	15	1.50	95	9.50	50	5.00	45	4.50
TOTAL GOVERNMENT		1285	540.75	2118	644.40	4870	1185.15	3811	952.60	994	158.55
American Antelope .25		35	8.75			35	8.75	14	3.50	21	5.25
Animal Life 2.50		15	37.50	4	10.00	19	47.50	12	30.00	7	17.50
Bears of Yellowstone 1.25		25	31.25	10	12.50	35	43.75	20	25.00	15	18.75
Birds - Skinner 1.00		30	30.00	23	23.00	53	53.00	30	30.00	23	23.00
Chittenden Y.N.P. 3.00		45	75.00	20	60.00	45	135.00	33	99.00	12	36.00
Cubby in Wonderland 1.00		30	30.00	219	219.00	249	249.00	245	245.00	4	4.00
Haynes Guide Book .50		65	32.50	135	67.50	200	100.00	176	88.00	24	12.00
Haynes Guide Book-Deluxe 1.00		20	20.00	10	10.00	30	30.00	8	8.00	22	22.00
James Bridger 12.50											
To More Boys .50		75	37.50	25	12.50	100	50.00	63	31.50	37	18.50
Langford's Discovery .75		30	22.50	25	18.75	55	41.25	40	30.00	15	11.25
Langford's Discovery-Deluxe 1.50		9	13.50	9	13.50	18	27.00	11	16.50	7	10.50
Nature Book 1.25		40	50.00	5	6.25	45	56.25	34	42.50	11	13.75
Oh, Ranger! 1.00		250	250.00	70	70.00	320	320.00	230	230.00		
Poems of Nature-Wild Life 1.50		15	22.50			15	22.50	5	7.50	10	15.00
Trailside Notes .10		140	14.00	175	17.50	1315	131.50	1225	122.50	90	9.00
Trees and Flowers .50		75	37.50	149	74.50	224	112.00	206	103.00	18	9.00
Trees and Shrubs (Paper) .35		60	10.50	10	3.50	40	14.00	23	8.05	17	5.95
Trees and Shrubs (Board) .50		15	7.50	10	5.00	25	12.50	14	7.00	11	5.50
Wilderness Neighbors 1.25		100	125.00			100	125.00	28	35.00	72	90.00
TOTAL MISCELLANEOUS		1044	875.50	899	723.50	2943	1599.00	2467	1210.05	414	511.95
GRAND TOTAL		2329	1421.25	3017	1367.90	7821	2889.15	6285	2148.65	963	467.25

Form c - 1933

Returned for credit during the season:

Conservation	1	$ 1.00
U.S.G.S. Maps Y.N.P.	6	1.25
Animal Life	4	10.00
Birds	5	5.00
	15	17.25

Cubby in Wonderland	15	$15.00
Oh, Ranger	40	40.00
Poems (Price reduced)	14	7.00
		62.00
		17.25
		$79.25

Yellowstone Park MUSEUM

day
week
For: month ending 9-30, 1933
season

STATEMENT OF CASH ACCOUNT

Br't F'r'd..... $

Cash Sales..... $2148.65
Total $2148.65

Remitted..... $2148.65

Balance on Hand..... $

STATEMENT OF ACCOUNT WITH YELLOWSTONE LIBRARY & MUSEUM ASSOC.

Br't F'r'd..... $

Value of Issues..... $2889.15
Total $2889.15

Cash Remitted..... $2148.65
Balance of accountability..... $740.50

Books returned for credit (June 17 to Sept. 18) $ 79.25
Signed

(Title)

OFFICE OF NATIONAL PARKS, BUILDINGS, AND [illegible]

November 3, 1938

REPORT OF THE NATURALIST DEPARTMENT

October, 1938

I. CURRENT OPERATIONS

A. Public Contact

Visitors: Dr. Jan Hofman, Dean for the Preservation of National Monuments and Historical Monuments, Comenius University, Bratesleva, Czechoslovakia, spent several days visiting in the park. Other visitors of note were: Mr. M Hiesl, Assist. Landscape Engineer, N.P.S., Dr. J. M. Wolfe and Forest Ranger J. L. Howard of White Sulphur Springs.

Lectures: On October 2 Assist. Park Naturalist Crowe spoke on the "Work of the Naturalist Department" before the Livingston Rotary Club. Forty members and guests were present. On October 3 and 4 he spoke at White Sulphur Springs, Montana to two hundred students of the High School and Elementary School. In the evening he spoke to fifty-five Rotarians.

On October 30 Park Naturalist Bauer spoke to the Livingston Rotary Club at noon, thirty-five present. In the evening to the Yellowstone Club, one hundred present. October 31, he spoke to the Bozeman Rotary Club in the evening on "Geology as Related to Yellowstone Park", eighty-five present.

Dr. Bauer also contacted a number of the college professors and high school teachers in Bozeman.

II. PERMANENT PROJECTS

A. Administrative

The Park Naturalist spent 7 days on Plaza Names; preparing data on cards, from maps and old reports. Three days were spent in the field studying wild life at Yarn and White Lakes, Mary Bay and Swan Lake. Particular interest swans. Two days were spent in lecturing at Bozeman and Livingston, several days on plans for winter work, and the remainder of the time on official correspondence, memos, and supervision.

Dr. Bauer also announced a number of the college lectures and high school teachers in Bozeman.

The Assistant Park Naturalist spent 10 days in the park closing museums and general preparation for winter, 4 days on preparation and shipping of specimens to nine men and schools, 7 days on library work, and 3 days on lecturing and contact work in Livingston and White Sulphur Springs.

The Junior Park Naturalist spent most of the month on museum cataloging, starting work on the library cards and book lettering. Fourteen days were spent on museum work, 4 on library work, 7 on auditing sales accounts, reports, nature notes, and general office clerical work. One day was spent checking field exhibits and one studying wild life.

B. Nature Notes

Nature Notes were edited, compiled, stencils cut, and published and distributed to 600 interested parties. This issue has received many favorable comments.

C. Library

8 books in circulation
16 books and pamphlets received and accessioned
26 magazines and periodicals received and filed

The 2 volume set of Chittenden's "History of Early Steamboat Navigation on the Missouri River" was purchased for the library. Through an exchange of a duplicate copy we now have a full set of the "Contributions to the Historical Society of Montana". A pamphlet of local interest was received from Lasel F. Hall, "Mammals of the Pocatello Region of Southeastern Idaho"; one of the co-authors, Wayne Whitlow, having been a former ranger naturalist here.

The task of checking Library of Congress catalog cards against the accession record and the books on hand, and writing the call number on the books has been started. We have approximately half enough cards on hand. It is hoped that the others can be purchased this winter.

The binding and lettering of ranger naturalist manuals is practically completed. It is planned that we shellac the bindings before the manuals are again put in circulation.

The magazines which have been stored for several years have been placed in our magazine stacks. Dr. Bauer presented the museum with old files of the National Geographic Magazine, and these together with former gifts of Mrs. Hill and Mrs. Allen, comprise almost complete files for fifteen years, and a number of duplicates for exchange.

D. Museums

Work: All museums and field exhibits were put in final readiness for winter. With the checking of all exhibits in the field exhibits, the checking of museums and filed exhibits, with the exception of Mammoth, has now been completed.

The preparation of the final record cards, preparatory to the final entries and checking of the accession and catalog records is well under way. In addition 40 articles have been accessioned and cataloged the past month.

Accessions: Among the items received during the month are: 2 sets of the famous Jackson photolithographs which were purchased from Haynes, one set to be kept intact and the other to be exhibited. Col. Thomson of Yosemite presented the museum with a splendid framed photograph of Director Cammerer.

E. Equipment

No equipment was received the past month.

F. Photographs

235 negatives in circulation

The negatives made by George Grant, while in the park the past summer, were returned to the Washington office. All current negatives have been recorded and filed.

G. Lantern Slides

100 slides in circulation

H. Publicity Clippings

No work was done on this project

I. Thermal Activity

Observations made by Assist. Park Naturalist Crowe

Angel Terrace continues to build up at a fairly constant rate. The colors are more varied than during the summer.

Blue Springs shows new springs and pools over the area to the west, which settled late in the summer. There is no overflow to the south.

Cleopatra Spring has increased in flow and the terrace shows a very fine display of colors. Old basins to the east and east have refilled.

Cupids Cave the spring above the cave has also increased in flow and covered a greater area. A large pool has formed near the spring and will soon overflow to the northeast.

Highland Terrace is still inactive

Hymen Terrace has increased greatly, covering a large portion of the terrace. The large pool on the west, emptied during the early summer, has refilled.

Jupiter Spring has increased a little over last month.

Main Terrace has increased a little in flow, covering a portion of both the north and south slopes.

Minerva Terrace nearly all the basins are filled on top and several on the southeast slope. It is quite possible there will be a complete restoration of this well-known terrace.

Mound Spring has increased slightly

Opal Spring has decreased a little. Eight inches of travertine deposition was noted.

Orange Spring Mound is the same, but the small mound just to the east has increased its flow greatly.

Palette Spring shows approximately the same flow as during the summer. The waters are spreading out onto the east and west sides of the slope.

White Elephant Back Terrace shows noticeable steppage at several points.

OLD FAITHFUL

Observations made by Ranger Frank Childs

Beehive Geyser played at 10:15 p.m., October 31.

Spouter in Black Sand Basin is almost dry, the water level having dropped 3½ to 4 feet; previously it has spouted almost constantly.

Rainbow Pool has quieted down and is no longer erupting as during the summer.

Three Sisters observed in eruption to height of 3 feet, twice.

J. Personnel

The Park Naturalist, Assistant, and Junior were on duty throughout the month. Temporary stenographer Knuff left our employ on September 30. Janitor Wilfred Mead was transferred to the Department of Plumbing and Sanitation at the request of Civil Service Investigator Hertzog on October 23. Since his position is justified as 100 percent janitor, it was no longer possible to keep him employed exclusively in the Naturalist Department.

Respectfully submitted,

C. Max Bauer
Park Naturalist

CMB:HAB
CC:
Superintendent
Director
Dumpus
Hall and Russell
Museum

DEPARTMENT OF THE INTERIOR

OFFICE OF NATIONAL PARKS, BUILDINGS, AND RE-SERVATIONS

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

December 2, 1933.

REPORT OF THE NATURALIST DEPARTMENT

November, 1933

I. CURRENT OPERATIONS

A. Public Contact

Visitors: none

Lectures: Reports from several of our ranger naturalists state that they have given lectures on the park in their several communities. Among them are: Dr. E. T. Bodenberg, Springfield, Ohio; Mr. Herbert Lystrup, Eau Claire, Wisconsin; Mr. Frank Oberhansley, Ogden, Utah; Mr. Charles Bowman Hutchins and Mr. Howard Stagner, Boulder, Colorado.

The permanent staff has planned several short trips for lectures in the adjoining states.

II. PERMANENT PROJECTS

A. Administrative

The Park Naturalist spent 8 days on study and carding of Place Names; 2 days on field research; 2 days on historical study; 2 days on winter plans, and the remainder of the time on supervision and official correspondence, etc.

The Assistant Park Naturalist spent 8½ days assisting the Junior Park Naturalist on checking Library of Congress cards against the accession list and re-arranging books on the shelves, 2 days repairing old and damaged books, 3 days sorting clippings, 2 days lettering books for shelves, 2 days numbering pamphlets, 1 day sorting magazines, 1 day selecting and packing specimens, 2 days on trip to Tetonia to interview Judge Swanner, ½ day on report of the trip, ½ day on thermal observations.

The Junior Park Naturalist spent the greater part of the month on library work; 1 day accessioning new material, 2 days checking Library of Congress cards, 2½ days re-arranging books, 3 days in Livingston selecting L.C. order numbers and getting assistance from

DEPARTMENT OF THE INTERIOR

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

the librarian, 5 days typing shelf-list cards, 5 days on museum records, and 2 days on filing, negatives, and general office routine.

B. Nature Notes

Material has been selected for the November-December issue but not yet edited or arranged. The subject will be "The Large Waterfowl".

C. Library

33 books in circulation
19 books and pamphlets received, accessioned, cataloged
22 magazines and periodicals received and filed

As previously stated the greater part of the month has been devoted to the library project by the Junior Park Naturalist. The final classification (detailed) and arrangement of books and pamphlets according to this classification, the selection of Library of Congress order numbers for L.C. cards, the preparation of shelf list cards, binding, lettering, and filing are well under way. The preparation of author, title, and subject cards will not be attempted until later.

D. Museums

Work: 3 days were spent on writing final catalog cards and entering the data in the catalog book.

Accessions: No material of note was received during the month.

E. Equipment

No equipment was received the past month.

F. Photographs

191 negatives in circulation

1 day was spent on cataloging, filing, and selection of negatives for publicity. No labeling or pasting of prints was done.

G. Lantern Slides

No slides in circulation.

H. Publicity Clippings

All clippings on hand sorted ready for pasting in scrap books.

I. Thermal Activity

MAMMOTH Observations by Assist. Park Naturalist Crowe

Angel Terrace three springs are flowing again about 60 feet south of the main outlet. The small springs to the north show increased flow also. The flow over the terrace shows no change from last month.

Baby Spring inactive.

Blue Springs about one-third of its area is devoid of water or algae, indicating a decrease in flow since October.

Cleopatra Spring still flowing strong as it was last month. The algae varies from dark green to pale pink in color.

Cupids Cave the new pool to the north is overflowing in three places toward Main Terrace; increase in flow.

Hymen Spring is steadily increasing and the terraces are well covered. The big pool which filled recently is now overflowing. The new outlet, 150 feet to the south on the old terrace, is increasing in size.

Jupiter Terrace same as in October.

Main Terrace the flow has greatly diminished and the terrace is now turning white.

Minerva Terrace the flow has ceased from the highest spring and the south portion of the terrace is dry. The north spring is flowing strong.

Mound Terrace increased flow from the spring has spread over a greater area reaching the service road at the base of the formation.

Narrow Gauge no activity.

Orange Spring Mound no change on the large mound but the little spring on the northeast has increased greatly.

6. Instantaneous flow

All activities are then carried out for instantaneous flow.

7. Thermal activity

Observations to monitor heat distribution

Small furnaces were equipped with flowing water at four points of the unit cooled. The small cooling is the north above the channel flow also. The flow over the furnace allows to obtain the last result.

Solar heating inactive.

Flow furnace with sub-fluid or its area is fluid or solar or other, indicating a sequence in flow below reference.

Flowing heating with fluidly should at it via last work. Its flows valves flow into tube flows to solar tube.

Double flow low two heat to the north in controlling to three pieces three tube between. Increase in flow.

Flame heating is steadily increasing and the afternoon one small stream. The hot heat skin fitted recently is now overflowing the new outlet. Its flow to the north as the old reservoir, is increasing in size.

Solar furnace seen as in operation.

Pipe furnace the flow has recently diminished and the valves is now nearly open.

Furnace furnace the flow has ceased from the highest spring and its south portion of the furnace is dry. The north spring is flowing steady.

Small furnace observed flow from the spring has ceased over a longer area reaching the water top at the base of the furnace.

Furnace empty as noted by.

Small boiler found as shown on the large mound but the little water on the reservoir all increased greatly.

Palette Spring the flow has increased over last month.

White Elephants Back Terrace quite noticeable seepage is visible at three points on this formation.

OLD FAITHFUL Observations by Dist. Ranger Childs.

Old Faithful Geyser the following is a summary of the activity for the past season, 1933.

Average interval for	June	65.609	min.
" "	July	64.932	"
" "	August	59.27	"
" "	September	64.[illegible]	"
" "	season, 1933	63.579	"

Shortest interval recorded	[illegible]	"
Longest interval recorded	83.0	"

The above data would indicate that the eruption intervals are considerably retarded during the cooler months of the year. It is the plan to check as many intervals as possible during the winter and to make special check on Old Faithful during the days of extremely low temperature. At the end of the year, June, 1934, I will plot a curve of the intervals taken throughout the year, showing, if any, the effect of changes of temperature upon the interval of eruptions of Old Faithful Geyser.

About twenty eruptions were checked during the month of November. The average interval was 64.9 minutes.

Upper Geyser Basin on November 4, C. A. Hamilton reports that the geyser behind his lower store erupted to a heighth as great as that of Old Faithful Geyser. Only one eruption was reported.

No record of an eruption of the Giant, Giantess, or Beehive. All other activity in the Upper Basin appears to be normal.

Black Sand Basin for the past two weeks activity has been increasing in the vicinity of Emerald Pool and Rainbow Pool. The basin was last inspected November 23, and the following observations were made:

Sunset Lake normal.

Rainbow Pool greater water flow, but no evidence of any recent eruptions.

Old Handkerchief Pool water flowing from the pool. More activity than was noted all season. Large bubbles come up from center of the pool similar to those that can be seen in the Firehole Lake. Takes handkerchiefs down immediately, holds them down for one to two minutes, and returns them to the surface.

New Handkerchief Pool functions normally. Evidence of increased activity.

Emerald Pool flowing more water than usual. Light boiling and bubbles near center and south end of pool.

Three Sisters Spring water is lowered considerably, disclosing four vents of openings. Two vents are flowing water. The spring nearest the road contains the least water.

Biscuit Basin activity normal.

Midway Geyser Basin activity normal, except "Opal" which is about ten inches lower than normal.

Firehole Lake Region all activity normal.

Lower Geyser Basin all activity normal.

Imperial Geyser Vicinity the new "Steady Geyser" of that region is still operating. The average heighth of its eruption is about fifteen feet. This geyser is located about [illegible] yards east and slightly north of the Imperial Geyser.

J. Personnel

Park Naturalist Bauer on duty all month.
Assistant Park Naturalist Crowe on duty all month.
Junior Park Naturalist Baggley on duty all month except for 3/4 day annual leave, November 24-25.

Respectfully submitted:

C. Max Bauer
Park Naturalist

Cmb:Mab
CC:
Superintendent
Director
Dr. Bumpus
Hall and Russell
Museum ✓

( )

OFFICE OF NATIONAL PARKS, BUILDINGS & RESERVATIONS
XXXXXXXXXXXXXXXXXXXXXXXX

January 4, 1934

REPORT OF THE NATURALIST DEPARTMENT

December, 1933

I. CURRENT OPERATIONS

A. Public Contact

Visitors: None

Lectures: The park naturalist and assistant park naturalist have each lectured and shown pictures once to the CWA group of men located at headquarters. These lectures were well received. Attendance was 80 and 150. Also this department took the lead in planning and carrying out the Christmas entertainment for the children of the Mammoth community.

II. PERMANENT PROJECTS

A. Administrative

The park naturalist was engaged six days on place name study and history; four days on plans; four days on official correspondence and memorandums and the remainder of the time on supervision.

The assistant park naturalist spent most of the month on the library, numbering and processing books, familiarizing himself with the classification and cataloging system. One day was spent on packing and shipping specimens and two days on filing; One day on thermal springs observations and one day at the Buffalo Ranch.

The junior park naturalist spent the first part of the month on library and filing work. On December 16 she took leave to the end of the month at which time her resignation became effective.

B. Nature Notes

Nature Notes on water fowl were edited and stencils cut the first week of the month. They were then sent to Mrs. Arnold for illustrating and were returned to this office on the last day of the month. They will be mimeographed and distributed as soon as possible.

C. Library

32 books in circulation
6 books and pamphlets received.

10 magazines and periodicals received and filed

D. Museums

Work: No work on museums except accessioning.

Accessions: Several accessions were made of articles received some years ago that had not been properly accessioned. One list entirely reworked was the W.H. Jackson prints.

E. Equipment

No equipment was received during the month.

F. Photographs

60 negatives in circulation

G. Lantern Slides

82 slides in circulation

H. Publicity Clippings

All clippings sorted ready for pasting

I. Thermal Activity

Mammoth Hot Springs - Observations by Assistant Park Naturalist Crowe.

Angel Terrace. The flow of the spring has decreased greatly during the past month. The travertine deposits about the outlet are pure white. The new springs to the southwest about 60 feet have increased, no doubt robbing Angel Spring of a portion of its water.

Blue Springs show an appreciable decrease in the amount of water.

Cleopatra Terrace - no change

Cupids Cave. The flow as strong as last month.

Highland Spring - still inactive

Hymen Spring has shown a steady increase all month. The big pool which was empty last summer now has a constant overflow. The new outlet on the old formation mentioned last month has increased to a noticeable flow and several old basins are now filled with water.

Jupiter Spring - no change

Main Spring has greatly decreased to a very slight flow.

Round Spring - no change

Narrow Gauge - still inactive after many months

Opal Spring is slowly decreasing in flow

Orange Spring Mound - no change

Palette Spring - strong flow with no change noticeable. The algae colorings are chiefly dark greens and browns.

White Elephant Back. Deposits continue as of last month.

Old Faithful District - Observations by District Ranger Childs.

Upper Geyser Basin

All activity normal. No record of any eruptions on the Giant, Giantess or the Beehive.

The average interval of eruptions of Old Faithful Geyser, checked during December, was 64.3 minutes. Although the interval of eruptions during December was shorter than the intervals recorded in November; the average minimum temperature during the month of November was considerably lower than during December.

Black Sand Basin

Sunset Lake)
Old Handkerchief Pool) Activity same as reported for the
Rainbow Pool) month of November.
New Handkerchief Pool)

Emerald Pool - Amount of water flow is about the same as last month. All boiling activity has ceased.

Three Sisters Springs. Activity same as reported for November, except the spring nearest the road is about three inches lower than reported last month.

Norris Geyser Basin. When passing through Norris on December 16, two eruptions of the Minute Man Geyser were timed and noted.

Interval - slightly over two minutes
Maximum height - 20 feet
Duration of each eruption:
First - 2 minutes, 5 seconds.
Second - 3 minutes.

Due to Ranger Childs' absence from his station he was unable to make observations on the other geyser basins.

Main Spring has greatly decreased to a very slight flow.

Sound Spring - no change.

Sparrow Spring - still positive after many months

Fuel Spring is slowly decreasing in flow

Sparrow Spring Spring - no change

Palette Spring - strong flow with no change noticeable. Two alpha substrates are slightly here greater than [illegible].

Little Elephant Spring. Seepage continues as of last month.

Old Natural District - Observations by District Manager Childs.

Sunset Crater Lands

All activity ceased. No amount of any eruptions on the Giant, Giantess or the Beehive.

The average interval of eruptions of Old Faithful Geyser, [illegible] during [illegible], was 61.2 minutes. Although the interval of eruptions during [illegible] was shorter than the interval, [illegible] in November, the average [illegible] temperature during the month of November has considerably lower than [illegible].

Black Sand Basin

Cascade Lake
Old Faithful Pool
Rainbow Pool
New Handkerchief Pool
} Activity same as reported for the month of November.

Emerald Pool - Amount of water flow is about the same as last month. All boiling activity has ceased.

Upper Geyser Springs. Activity same as reported for November, except the spring nearest the road is about three inches lower than reported last month.

Norris Geyser Basin. Some [illegible] Norris on December 14, two eruptions of the Giants [illegible] were [illegible].
Interval - [illegible] over [illegible] minutes
Maximum height - [illegible] feet
Duration of each eruption:
First - [illegible] minutes, [illegible] seconds.
Second - [illegible] minutes.

Due to Sunset Childs' absence from his station he was unable to make observations on the other geyser basins.

J. Personnel

Park Naturalist Bauer was on duty all month. Assistant Park Naturalist Crowe was on duty all month except three days, one day annual leave and two days sick leave. Junior Park Naturalist Langley was on duty until noon December 16.

Respectfully submitted

C. Max Bauer
Park Naturalist

Copies to:
Director
Dr. Bumpus
Messrs. Hall & Russell
Museum. ✓

CMB/ew

NATURALIST DEPARTMENT

1933

No changes in the regular staff of this department were made during 1933. The staff is as follows:

Park Naturalist	C. Max Bauer
Assistant Park Naturalist	George C. Crowe
Junior Park Naturalist	Herma A. Baggley
Janitor	Wilfred J. Mead

The summer staff included seventeen (17) ranger naturalists, one (1) clerk-stenographer and two (2) laborers or caretakers for the museums. Three of the ranger naturalists were designated senior ranger naturalists and they directly supervised the naturalist activities at Fishing Bridge, Old Faithful and Mammoth Hot Springs.

The museums were opened and closed for the season as follows:

	Opening Date	Closing Date
Mammoth Museum	June 11	September 20
Old Faithful Museum	" 18	" 18
Fishing Bridge Museum	" 18	" 18
Norris Museum	" 20	" 13
Madison Museum	July 1	August 29

Museum hours for each museum are as follows:

Mammoth Museum	8:00	A.M. to	8:00	P.M.
Old Faithful Museum	8:00	"	9:30	"
Fishing Bridge Museum	8:00	"	8:00	"
Norris Museum	8:00	"	5:00	"
Madison Museum	8:00	"	5:00	"

An outside amphitheater was added to the Old Faithful museum by funds provided by the American Association of Museums. Also through the same source trailside or roadside field exhibits were built at Rhyo-Travertine Gulch, Swan Lake Flat, Beaver Dams, Nymph Lake, Tuff Cliff, and Firehole Canyon. Four of these were installed by Dr. Carl P. Russell and Mr. Herbert Maier this season.

This summer the Old Faithful court has been planted with grass, flowers, trees, and shrubs and makes a creditable showing of local plant life.

NATURALIST DEPARTMENT

1933

No changes in the regular staff of this department were made during 1933. The staff is as follows:

Park Naturalist	[illegible]
Assistant Park Naturalist	George C. Crowe
Junior Park Naturalist	[illegible]
Janitor	Wilfred J. [illegible]

The summer staff included seventeen (17) ranger naturalists, one (1) [illegible] and two (2) laborers as assistants for the [illegible]. Three of the ranger naturalists were designated senior ranger naturalists and they directly supervised the naturalist activities at Fishing Bridge, Old Faithful and Mammoth Hot Springs.

The summer were opened and closed for the season as follows:

	Opening Date	Closing Date
Mammoth Museum	June 11	September [illegible]
Old Faithful Museum	" 12	" [illegible]
Fishing Bridge Museum	" 18	" 18
Norris Museum	" 20	" 15
Madison Museum	July 1	August 29

Museum hours for each museum are as follows:

Mammoth Museum	8:00 A.M.	to 8:00 P.M.
Old Faithful Museum	8:00 "	9:30 "
Fishing Bridge Museum	8:00 "	8:00 "
Norris Museum	8:00 "	5:00 "
Madison Museum	8:00 "	5:00 "

An outside amphitheatre was added to the Old Faithful museum by funds provided by the Canadian Association of Museums. Also through the same source trailside or roadside field exhibits were built at Nuyo-Tongariro Point, Bean Lake Flat, Beaver Lake, Grant Lake, Taft Point, and Firehole Canyon. Four of these were installed by Dr. Ford C. Russell and Mr. Herbert Maier this season.

This summer the Old Faithful guest has been planted with grass, flowers, trees, and shrubs and makes a [illegible] showing of local plant life.

Much improvement was made at the Mammoth Museum. First, the offices were all moved into the north end of the building. Second, the old office and library was renovated and made into a fine exhibit room for geology. Third, the space under the new offices was excavated, a stairway built, cement floor put in and plastered and painted. This now houses the Yellowstone Library. Fourth, the main basement was renovated and painted for workshop and storage rooms. Fifth, a rearrangement of exhibits in the museum gives a clean cut and professional air to the displays.

During the winter the Yellowstone Library and Museum Association was formed to care for donations and other funds received for the development of the library and museums.

"Nature Notes" is now published bi-monthly and each issue is more or less devoted to one subject. Because of the large mailing list of about 750 it is deemed advisable not to publish monthly as it is necessary to conserve paper and materials.

A twenty-power telescope has been installed at the water front at the Fishing Bridge Museum and another of the same type on top of Mount Washburn.

Field Naturalist Carl P. Russell was in the park for six weeks this season installing Field Exhibits and revising some former installations.

This year we have had excellent cooperation from the Princeton Geological Research School, and students from Columbia University and the University of Chicago. They have reported to the Park Naturalist their findings and their contributions to the geological knowledge of the region have been very valuable.

Lectures, Guided Trips and Auto Treks.

These services rendered by the Naturalist Department are well received by the visitors. Many nature lovers have commented on the excellent character of the work and the help they received in enjoying the park. An effort is being made to give accurate information in such a manner that it will be entertaining and not tedious.

Summer Activities - Educational Department

Station	Field Trips		Lectures		Museums	Auto Caravans		
	No.	Att.	No.	Att.	Att.	No.	Cars	Att.
Mammoth	223	4152	162	8370	45605	88	1045	4391
Norris	307	8452	157	6019	28851			
Madison	29	359	197	7414	12167			
Old Faithful	145	8419	172	84576	68796	89	2268	7209
West Thumb	84	3601	64	4710				
Fishing Bridge	77	2511	89	31410	37202	79	728	2740
Canyon	141	3497	241	42672		71	869	3021
Mount Washburn			3427	10496				
Total	1006	30991	4509	195667	192621	327	4907	17361
Special Parties	122	7412						

GRAND TOTAL CONTACTS 444,052

| | | |

GEYSERS AND HOT SPRINGS

Mammoth Hot Springs. - Monthly observations have been made throughout the year and the information carded. The most outstanding observation is that all hot water activity changes considerably from week to week and this is especially true of the Mammoth Hot Springs. Two springs that have not been particularly active for thirty or forty years were flowing all season. They are the Palette Spring and the Opal Spring on the lower terrace not far above the Hotel Terrace. Angel Spring has been particularly active on the south west end of the terrace. Hymen Spring is much smaller this year.

Norris Geyser Basin. - The interval for Valentine is now well determined as 20 hours. It is powerful and quite regular. Whirligig has an interval of 1 hour and 25 minutes and erupts for 20 minutes. Emerald Spring is rather quiet again. Ebony geyser erupts about every eight hours. A new blueprint map of the basin was made by a temporary ranger and completed by the Engineering Department.

Lower Geyser Basin. - No particular changes have been noted in the activity in this area. However several geysers northwest of the Fountain Geyser are often seen in eruption. These include Jet, Clepsydra and a geyser about 400 yards northwest of the latter.

Upper Geyser Basin. - This season Rainbow Pool in the Black Sand Basin has become hotter and killed out the algae, boiling violently it erupts to a height of 30 feet about every 20 minutes. Since this is quite near to the old Handkerchief Pool it has been affected. Since August 10th the old Handkerchief Pool has been able to circulate handkerchiefs as it did prior to 1928. The following geysers have fairly regular intervals: Old Faithful, 65 minutes; Daisy, 90 minutes; Riverside, 8 hours; Grand, 20 hours. The Giant has played at least three times this summer, June 2nd, July 25th, and August 19th.

West Thumb Basin. - Lakeshore Geyser has been observed often this season. The Paint Pots were especially colored and beautiful. The Twin geysers did not erupt so violently as last year but behaved much as they have for many years past.

Respectfully submitted

C. Max Bauer
Park Naturalist

[illegible]

[illegible] Springs. - Monthly observations have been made throughout the year and the information [illegible]. The most [illegible] observation is that all but [illegible] activity changes considerably from [illegible] to [illegible] and this is especially true of the [illegible] Springs. [illegible] Springs [illegible] have been particularly active for thirty or forty years were flowing all season. They are the Palette Spring and the Opal Spring on the lower terrace and for above the Hotel Terrace. Angel Spring has been particularly active on the South east end of the terrace. Hymen Spring is much smaller this year.

[illegible] Geyser Basin. - The interval for Valentine is now well determined as 20 hours. It is powerful and quite regular. Whirligig has an interval of 1 hour and 10 minutes and erupts for 20 minutes. Emerald Spring is rather quiet again. Ebony geyser erupts about every eight hours. A new blueprint map of the basin was made by a temporary ranger and completed by the Engineering Department.

Lower Geyser Basin. - No particular changes have been noted in the activity in this area. However several geysers northwest of the Fountain Geyser are often seen in eruption. These include Jet, Clepsydra and a geyser about 400 yards northeast of the latter.

Upper Geyser Basin. - This season Minton Pool in the Thumb Sand Basin has become better and killed out the algae, boiling violently it erupts to a height of 20 feet about every 20 minutes. Since this is quite near to the old Handkerchief Pool it has been affected. Since August 10th the old Handkerchief Pool has been able to circulate handkerchiefs as it did prior to 1928. The following geysers have fairly regular intervals: [illegible] Faithful, [illegible] minutes; [illegible], 90 minutes; [illegible], 6 hours; Grand, 20 hours. The Giant has played at least three times this summer, June 2nd, July 25th, and August 19th.

West Thumb Basin. - Lakeshore Geyser has been observed often this season. The Point Jets were especially mixed and beautiful. The Twin geysers did not erupt as violently as last year but behaved much as they have for many years past.

Respectfully submitted

[illegible]
Park Naturalist

OFFICE OF NATIONAL PARKS, BUILDINGS & RESERVATIONS

February 8, 1934

REPORT OF THE NATURALIST DEPARTMENT

January, 1934

I. CURRENT OPERATIONS

A. Public Contact

Visitors: Mr. Ned Frost, guide, from Cody, Wyoming. Judge George Y. Patten, of Bozeman, Montana.

Lectures: Slides and movies have been used three times during the month in lectures given for the CWA men at Mammoth Hot Springs. Assistant Park Naturalist Crowe was on a lecture tour in central Wyoming from January 12 to January 26 inclusive, under the auspices of the Boy Scouts of America. Mr. Ralph D. Childs, the State Executive, arranged the tour and dates at the following towns; Powell, Lovell, Cowley, Greybull, Worland, Casper, Riverton and Lander, returning to Casper for further engagements at the end of the trip. The lectures were before schools, civic organizations and sportsmen's clubs and were very well received. One radio broadcast was given from Casper. On this trip Mr. Crowe gave 30 lectures to a total of 3030 people. A full detail report may be found in a memorandum to the Superintendent, dated February 1, 1934.

II. PERMANENT PROJECTS

Administrative

The park naturalist was engaged in miscellaneous routine, publicity items, nature notes, summer plans and routine from the first to the thirteenth of the month. Gave two lectures on history to CWA workers and accompanied Acting Superintendent Edwards to Bozeman on January 9, where Mr. Edwards addressed the Rotary Club. On January 13 I began a trip in connection with oral examinations for junior naturalists at St. Paul, Omaha and Lincoln. On this trip I visited the biology and geology departments and museums of the University of Minnesota, University of Nebraska and University of Colorado. The trip proved very satisfactory from every standpoint and I returned to headquarters on January 25.

The assistant park naturalist spent the early part of the month on library work, mostly numbering and lettering books and

handling routine matters.

As stated earlier in this report I made a lecture tour of central Wyoming from January 12 to 22, inclusive.

The junior park naturalist position is vacant at present.

B. Nature Notes

Nature Notes on some of the large water fowl of the park were mimeographed, stapled and mailed to 600 addresses during the first week of the month.

C. Library

Work on numbering books continued.

31 books in circulation
15 books and 18 pamphlets were received
8 magazines received.

D. Museums

Work: none undertaken

Accessions: A large spear point from Daly Ranch in Yellowstone Valley was received. A hand-wrought iron clevis from Independence Rock, Wyoming, was received.

A portion of a tree 8" x 18" was recovered from a ditch in the travertine of the so-called Hotel Terrace at Mammoth Hot Springs, from a depth of seven feet below the surface. The exterior of the log had rotted and was missing but the interior was remarkably well preserved, although several thousand years old it was not petrified. Wood buried in the travertine apparently does not petrify.

E. Equipment

No equipment was received during the month. However, further excavation in the south end of the basement of the Mammoth Museum will make room for the study collections including the herbarium, the skin cases, and a study collection of rocks and minerals.

F. Photographs

50 negatives in circulation

G. Lantern Slides

142 lantern slides in circulation.
3 films, 16 mm, 300 ft. long in use.

H. Publicity Clippings

No work done

I. Thermal Activity

Mammoth Hot Springs - Observations by Yellowstone Park Naturalist Crowe.

A marked decrease in the flow of water from most of the springs was noted during the past month.

Angel Spring - has lost over half its flow of December to the new spring sixty feet to the south. Seven basins six to eight inches deep have built up during the month, covering an area of forty by sixty feet.

Baby Spring. Inactive.

Blue Springs - have decreased also. The flow extends a little way down the slope between Jupiter and Pulpit Terrace. On the west edge of this formation the surface has settled at least 14". A slump occurred here early last fall. Numerous little domes, three to six inches in height and about two inches in diameter are building up a crack forty feet long.

Cleopatre Spring. No changes from last month

Cupids Cave - has increased a little. The spring has shifted about four feet to the east.

Diana Spring - shows increase in flow and the basins are refilled on the east edge of the formation.

Hymen Spring - has also increased in its flow and the new outlet on the west side of this formation is larger than in December.

Jupiter Spring - shows just a little overflow

Main Spring - has almost ceased flowing

Mound Spring - the same as last month.

Minerva Spring - is decreasing.

Opal Spring - no change

The algae in evidence are those of the darker shades of coloring.

Old Faithful District - Observations by District Ranger Childs.

Upper Geyser Basin

Old Faithful Geyser. The average interval of eruptions checked during the month of January was 66.6 minutes.

Giantess Geyser. Became more active during the latter part of January. A tiny vent, 75 feet south of the Giantess erupts to the height of about three feet whenever a sudden burst of boiling action takes place in the crater of the Giantess. This geyser started erupting at 2:40 p.m. on January 29 and was in action 21 hours.

Sawmill Geyser. During the fall months the Sawmill Geyser was seldom seen in eruption. During the month of January it was noted to be erupting almost constantly.

Giant Geyser. On the morning of the 6th increased activity was noted. The Mastiff, Bijou and Catfish Geysers were all erupting at the same time. On the morning of January 8 it was found that the Giant had erupted, throwing the log "indicator" over 40 feet from the cone. This geyser erupted again on January 25 or 26, and at noon of January 28.

All other activity was normal.

Black Sand Basin

Three Sisters Springs - still remain almost dry. No changes from last month.

Old Handkerchief Pool. Beginning January 8 a decrease in water flow was noted. Since then the pool has been becoming constantly lower. At present it is almost dry.

Other activity was normal, except several changes in pools that supply the hot water to the Waterkeeper's house and Hamilton's store. The spring that originally supplies most of the hot water has gone completely dry.

Midway Geyser Basin. ← BISCUIT

Black Pearl Pool. Mr. Childs is not certain whether this is the name of the pool he has in mind. It is the first pool on the north side of the walk on the west side of the river. Under normal conditions it is a large double pool, milky blue in color. The east half of the pool was always very hot while the east side was always considerably cooler. Sometime during the latter part of the month, about January 20, (estimated) a violent eruption had taken place just east of the Black Diamond. Upon first observation it was thought that it was part of the Black Diamond that had erupted. Closer observation showed that

the new existing pool, [illegible] feet by [illegible] feet in size, had not existed a week before. Evidence of large stones and mud scattered around the new pool shows that the eruption must have taken place with a good deal of violence and with a large volume of water. The new outbreak has thrown out several tons of rocks and broken pieces of [illegible]. Some of the rocks, 30 feet from the pool would more than 500 pounds. At present there is a narrow ledge of rock separating the new pool from the Black Diamond. The Black Diamond pool is about 12 inches above the level of the new pool. A small stream of water flows from the Black Diamond into the new pool, and about six times this amount of water is flowing from the new pool into the river. At present the new pool is very muddy and very hot. Violent boiling occasionally takes place on the north side. When this occurs a slight shock can be felt several feet from the edge. It is interesting to note the number of pine cones and twigs imbedded deep in the formation that was cast out at the time of the eruption; as at present there are no trees standing anywhere near the pool.

Silver Globe Spring. At irregular intervals this spring fills, erupts to a height of four feet and then drains almost completely.

Jewel Geyser. Activity normal. As far as we last week an occasional well-washed handkerchief is thrown out by the eruption.

Other Activity. About 100 feet east of the Jewel Geyser there are a series of vents forming an irregular circle about two feet wide and 12 feet long. At intervals of about every three minutes these vents all play simultaneously to a height of about seven feet. The eruption of all the vents forms an almost symmetrical fan.

Lower Geyser Basin. All activity normal.

Firehole Lake Region. Not observed.

Shoshone Lake Geyser Basin.

Union Geyser. Activity normal. Two eruptions noted this month. Interval not recorded as it was not certain whether these were consecutive eruptions.

The small geyser (name not known) on the west side of the creek almost due east of the Shoshone Cabin is very active. The average interval is about 20 minutes and the average height of eruptions is about 20 feet.

J. Personnel

The park naturalist was on duty all month, with the exception of one day sick leave. Assistant Park Naturalist on duty all month. Position of junior park naturalist vacant. Several half-days of stenographic help

were supplied by the superintendent's office.

Respectfully submitted

C. Max Bauer
Park Naturalist

Copies to:
Director
Mr. Pumpus
Messrs. Hall & Russell
Museum ✓
CMB/cw

OFFICE OF NATIONAL PARKS, BUILDINGS & RESERVATIONS

March 2, 1934

REPORT OF THE NATURALIST DEPARTMENT

February, 1934

I. CURRENT OPERATIONS

A. Public Contact

Visitors: Mr. Ed Commers, Secretary of the Dude Ranchers Association and Mr. H.G. Clark of the Standard Oil Company visited Mammoth Hot Springs in the interest of publicity matters.

Lectures: Lectures with slides and movies were given each week for the CWA men at Mammoth by the park naturalist and assistant park naturalist. Acting Superintendent Edwar e spoke at a State Rotary gathering at Whitehall, Montana.

The following lectures were given by former Junior Park Naturalist Herma A. Bagsley in January

January 8 -	Moscow, Idaho, Botany Seminar	25
" 9 -	Moscow, Idaho, Sigma Xi	250
" 10 -	Moscow, Idaho, AAUW	75
" 11 -	Lewiston, Idaho Normal School	500
" 11 -	" " High School	1000
" 12 -	Moscow, Idaho, Wesley Foundation	250
" 17 -	Spokane, Washington, Mountaineers Club	53

II. PERMANENT PROJECTS

A. Administrative

The routine administrative work was carried on and in addition plans were made for selecting ranger naturalists. Eleven outlines for movie reels were prepared; plans for use of basement and additional room completed; five days were spent on Nature Notes plans, editing and mimeographing and mailing. Three museum cases were planned and two ordered; three museum exhibits were planned and work begun on two of them.

B. Nature Notes

The January-February number was prepared, [illegible] and mailed to 690 addresses. This issue is largely on geology.

C. Library

Several days were spent in dusting and arranging books.

36 books in circulation
10 pamphlets and 5 books received
9 magazines received.

D. Museums

Work: Three exhibits planned and work on two begun. The two begun are an up-to-date Columnar section and the core drill record at the Upper Geyser Basin.

Accessions: No work was done on accessioning or cataloging.

E. Equipment

A humidor to care for 36 movie films was planned and work on its construction begun.

F. Photographs

We now have 24 movie reels of 35 mm size and 9 16 mm size with negative material enough for four or five more reels.

Thirty negatives in circulation.

G. Lantern Slides

One hundred forty eight slides in use.

Three 16 mm films from Yosemite in use and one 35 mm color film used and returned to the Consolidated Corporation. This latter is a splendid magnacolor film with sound entitled "Wtai-sh-dahtsi." (Winnebago for "Yellowstone"). It is scenic and educational. It has recently been released for showing in public theaters over the country.

H. Publicity Clippings

No work done.

I. Thermal Activity

Mammoth Hot Springs - Observations by Assistant Park Naturalist Crowe.

Angel Terrace though still beautiful in color the flow of water is still decreasing from the spring that has been so active for over a year and a half. The flow is increasing from a number of small outlets along the slope to the north, filling six large basins below.. The active springs to the south are flowing the same as last month.

Blue Springs shows no noticeable change from last month.

Cleopatra Spring has increased slightly during the past month. The little spring 50 feet to the south is inactive.

Cupids Cave has increased about one-quarter of last month's flow.

Hymen Spring same as in January.

Jupiter Spring has not sufficient water to flow over the slope of the terraces.

Main Terrace shows a slight seepage of water

Mound Spring has increased in its flow and the springs below near the Moore residence are more active than at any time this winter.

Opal Spring has decreased slightly during the latter part of the month.

Pulpit Terrace. The water overflowing from Blue Springs is flowing down the south portion of this formation.

Palette Spring has increased a third more in flow over last month. The waters have entirely covered the old trail on the west side of the terrace.

Many steam vents are in evidence scattered over the old formations, especially along very old cracks in the travertine.

An old opening in the formation below Mammoth is steaming continuously, about 100 yards down the slope from the Deatty garage.

Old Faithful District - Observations by Ranger Frank Childs

Upper Geyser Basin

The Beehive Geyser is much better at present but was not

erupted to date. Several minor changes have been noted and an increased flow of water from the majority of geysers and hot springs as compared to early last fall.

Giant Geyser erupted seventeen during the period of February 19 and 21.

Black Sand Basin.

Emerald Pool, Handkerchief Pool and Rainbow Pool are now back to last summer's normal.

Cliff Geyser is now playing to greater height than I have ever before observed it. However, it does not play as high as stated on the sign.

Green Spring. During the past summer this spring was dull brown in color. Very little water ever flowed from it. At present it is a beautiful green in color and the water flow has increased 70%. Last month when it was observed from the top of the Madison Plateau it appeared only a very slight shade lighter in color than Emerald Pool.

Biscuit Basin

On January 27 a small geyser was observed in eruption. This geyser is located about 30 feet west of Artemisia Geyser. This geyser played to a height of 66 feet and was a perfect miniature of Old Faithful Geyser

The new geyser ("Black Boulder Geyser") has not shown any signs of new activity. The pool is almost clear now, but the water flow has not diminished.

Shoshone Geyser Basin

Activity is normal

Lower Geyser Basin

Activity is normal

Midway Geyser Basin.

Excelsior Geyser: The water flow from this geyser has been constantly increasing all winter and at present is flowing about 50 (second) feet of water, estimated.

J. Personnel

Park Naturalist Lemon was on duty all months as the Assistant Park Naturalist Crowe. The position of junior park naturalist is still vacant. Stenographic help for necessary reports and letters was furnished by the superintendent's office.

Respectfully submitted

C. Max Bauer
Park Naturalist

CC - The Director
Dr. Pumpus
Messrs. Russell & Ball
Museum

CMB/ew

DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
YELLOWSTONE NATIONAL PARK
YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

April 4, 1934.

REPORT OF THE NATURALIST DEPARTMENT

March, 1934

I. CURRENT OPERATIONS

A. Public Contact

Visitors: Mr. Wm. Rush of the Forest Service and Dr. W. L. Jellison, Entomologist from the U. S. Laboratory of Hamilton, Montana visited the Park on March 21st in connection with their work on Wild Life parasites and disease. They were particularly interested in the study of Rocky Mountain spotted fever. On March 25th an automobile filled with people entered West Yellowstone and were able to drive to Old Faithful, the first tourists of the season.

Lectures: The C. W. A. group continued and the Park Naturalist and Assistant Park Naturalist gave lectures on three Monday evenings of the month to them. Ranger Naturalists Stagner, Hutchins, Oberhausley, Smith, Cordon and Lystrup reported giving lectures on Yellowstone and clippings were received from newspapers on the lectures.

II. PERMANENT PROJECTS

A. Administrative

Park Naturalist Bauer spent some time on Stratigraphic section for exhibit purposes and on planning other exhibits. From March 6 to March 9, inclusive, were spent on a ski trip in the Park as far as Norris Geyser Basin. Routine matters occupied the remainder of the time except the selection of Ranger Naturalists. He was on leave from March 19 to March 31, inclusive.

Assistant Park Naturalist Crowe attended to much detail work including the sketching of the geologic column, speaking at M. E. Church in Bozeman, making observations on wild life and Hot Springs, supervising work in basement done by C. W. A., packing and shipping specimens, running mimeograph for Nature Notes, church services, etc., repair of tents, camp stoves, etc., fixing up shop in basement and placing tools, etc.

Junior Park Naturalist position vacant.

B. Nature Notes

Made plans for an issue on history.

C. Library

Assistant Park Naturalist worked parts of several days lettering books.

22 books in circulation
8 pamphlets received
2 books received
20 magazines received.

D. Museums

Work: Preparation of Firehole Canyon exhibit; Geologic Columnar section; core drill exhibit for O. F. Museum; copper plate for panorama exhibit on Swan Lake flat.

Accessions: Several objects received and contacts made for material from Col. Redington and also for some Moran pictures.

E. Equipment

Two museum cases ordered. Copper plate received.

F. Photographs

47 negatives in circulation.

G. Lantern Slides

67 slides in circulation.

H. Publicity Clippings

No work done.

I. Thermal Activity

Mammoth Hot Springs - Observations by Assistant Park Naturalist Crowe.

Angel Terrace. The flow over the main portion is about the same as last month. The new activity to the south has decreased greatly, while to the north it has increased. A small new seepage has started on top of the formation.

Blue Springs. On the 26th the volume of water diminished less than half and several large basins or pools were dry until the 28th.

Cleopatra Spring shows no noticeable change from last month.

White Elephant Back Terrace. No change.

Hymen Spring. The increased flow of last month still continues with noticeable deposition of travertine over a wide area. The basins and algae coloring are the most beautiful of any time during last two years.

Jupiter Spring. There is very little water flowing from the basin.

Main Terrace. Water is flowing from the formation in two places.

Monnd Spring. The same as last month.

Minerva Spring. Very little activity.

New Spring between Devils Kitchen and Elephant's Back has ceased flowing.

Orange Spring Mound is the same as last month.

Opal Spring is decreasing.

Palette Spring continues strong covering a wide area on both sides of the Devils Thumb.

Pulpit Terrace. The overflow from Blue Springs is showing up just south of this formation.

A number of fine specimens were collected at Blue Springs while some of the pools were empty.

The Park Naturalist is cooperating with the Engineering Dept. in laying out a new paved walk from Liberty Leap to Minerva Terrace.

Old Faithful District - Observations by Ranger Frank Childs.

Upper Geyser Basin. No report.

Norris Geyser Basin by Park Naturalist Bauer. The basin was visited on March 7th. There appeared to be a very large number of small steam vents or fumaroles. Porcelain hill was especially active. Emerald springs was clear and overflowing slightly. No geysers erupted during the 40 minutes spent in the basin. There was much snow on the north side of

the Museum but due to the warm earth there was no snow in the basin itself not on the road from the top of the hill southward for half a mile.

J. Personnel

Park Naturalist Bauer was on duty the first half of the month and on leave from March 19 to March 31, inclusive. Assistant Park Naturalist Crowe was on duty all month.

Respectfully submitted,

C. Max Bauer,
Park Naturalist

CC - The Director
Dr. Dunpus
Messrs. Russell & Fall
Museum

CMB:CR

Museum.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

FFICE OF THE SUPERINTENDENT

May 1, 1934

REPORT OF THE NATURALIST DEPARTMENT
for
April, 1934

I. CURRENT OPERATIONS

A. Public Contact

Visitors: A few local people came into the Park for short sight-seeing trips. Prof. A. M. Bosman of University of Pretoria, South Africa made a three day visit to the Park, April 20 to 23.

Lectures: Park Naturalist Bauer made a five day trip into western Montana, April 23 to 27 to visit the Montana School of Mines at Butte, the State University at Missoula and to lecture at Hamilton in the Bitteroot Valley. While at Butte Pres. Thompson, Prof. Perry and Prof. Scott and Atty. Thos. J. Davis were interviewed. At Missoula Pres. Clapp, Prof. Deiss and Prof. Rowe were interviewed. At Hamilton the U. S. Public Health Service Spotted Fever Laboratory was visited and illustrated lectures given to 1091 persons as follows:

Lions Club	30
Open Lecture	450
Grade Schools (5 to 8 grade)	350
High School	240
Men's Forum	21

Assistant Park Naturalist Crowe gave a nature talk in Livingston to a church group of 125. Former Junior Park Naturalist Sagsley gave an illustrated talk on Yellowstone Trees and Flowers to the Livingston Rotary Club April 30. Mr. Joffe also gave several illustrated talks during the month.

II. PERMANENT PROJECTS

A. Administrative

Plans for the summer, the selection of a Junior Park Naturalist and library work occupied most of the Park Naturalist's time. Correspondence was heavy and many letters required some investigation to answer. Assistant Naturalist Crowe spent most of the month lettering, numbering and repairing library books. Cupboards and shelves placed in the basement rooms and everything placed in order. He also made two trips to the Upper Basin and one trip

DEPARTMENT OF THE INTERIOR

to the Lake. Museums inspected and found to be in good condition.

B. Nature Notes

An issue on history was prepared and edited and stenciled but not yet mimeographed.

C. Library

A large part of the month was spent working on the library. A clerk-stenographer was added to the staff the first of the month and she has spent at least half her time on library work.

59 books in circulation
11 pamphlets and bulletins received
7 magazines received
1 book received.

D. Museums

Work: All materials from 3rd floor barracks store room was removed to basement storage in the Mammoth Museum. Shelving and two rooms in the basement will give storage for all museum exhibit materials not in actual use.

Accessions: No work on museum accessions or cataloguing.

E. Equipment

No equipment received. Mimeograph, addressograph and typewriters were repaired.

F. Photographs

A number of photographs of mountain sheep were secured.
20 negatives in circulation.

G. Lantern Slides

112 slides in circulation.

H. Publicity Clippings

No work done.

I. Thermal Activity

Mammoth Hot Springs - Observations by Assistant Park Naturalist Crowe.

Angel Springs and Terrace show an increasing flow of water, especially to the north where several of the old basins are now filled with water. The new activity to the south has decreased greatly.

Blue Springs. The flow of water has been slowly increasing during the month, overflowing toward Pulpit Terrace.

Cupids Cave has a strong flow of water and rapid deposition of travertine at the edge of the pool is rapidly increasing its size. This is one of the beauty spots on the formations.

Hymen Spring shows no change.

Opal Spring has decreased one-half during the month.

Orange Spring has increased slightly.

Palette Spring has also increased during the month and the flow has spread over a wider area east of Devils Thumb.

Main Terrace has increased in flow at both the east and west ends. A new pool has filled an old depression 40' to the south.

Mound Spring shows a slight increase.

Soda Spring. The water level has raised 6" and escape of gas has greatly increased. The sulphur spring just to the south has also increased.

White Elephants Back shows increase in flow from several vents and the coloring is coming back.

West Thumb

While there has been no outstanding activity, it should be noted that the water level of the hot pools are 10" to 14" lower.

Morris Basin

The violent boiling reported last month has continued through April, throwing the water 8 to 10 feet high.

Yellowstone River

Mud Volcano Area. Two large mud craters are active in the bottom of the Yellowstone River, exposed by the extremely low water. This activity is on the east side of the river opposite the Mud Volcano.

Old Faithful District

Report that the Giant Geyser erupted about the middle of the month.

J. Personnel

Park Naturalist Bauer was on duty all month. Assistant Park Naturalist Crowe was on duty all month except April 4th which was taken on annual leave. Miss Clara Raab reported for work as temporary clerk-stenographer and was on duty all month.

Respectfully submitted,

C. Max Bauer,
Park Naturalist

CC - The Director
Dr. Bumpus
Messrs. Russell & Hall
Museum

CMB:CR

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

June 4, 1934

REPORT OF THE NATURALIST DEPARTMENT
For
May, 1934

I. CURRENT OPERATIONS

A. Public Contact

Visitors: Owing to an early spring the roads were all open and visitors have been coming in since May first. Pre-season travel has been large. Some visitors of national or state-wide importance are mentioned. Several foreign visitors are noted.

F. W. Isaac and wife of Endebess, Kenya Colony, British East Africa, an explorer and naturalist, a retired F. C. S. employee.

Nils G. Skield, Director of the Swedish Technical Museum, Norrkoping, Sweden.

Army Chaplain Clark, visited CCC Camps.

Assistant Superintendent Bolton, Hot Springs, National Park.

Butte School of Mines, group of 23 students and 3 adults.

Black Hills Boosters, accompanied by several cars from Cody, 38 cars, 110 people.

Judge and Mrs. Patton and daughter from Bozeman, Montana

19 Boy Scouts and their leaders from White Sulphur Springs, Montana

Mr. R. A. Whitehead, General Motors Company, Lansing, Michigan.

Lectures: Naturalists Bauer and Crowe each gave a welcoming talk to the four CCC Camps which were in the Park. Dr. Bauer conducted the Butte School of Mines Party over the Mammoth Hot Spring Terraces.

II. PERMANENT PROJECTS

A. Administrative

The Park Naturalist was busy most of the month on work connected with the opening of the museums, summer plans and names for the Ranger-Naturalists. A trip to the Big Horn Canyon and the Medicine Wheel was made with Supt. Toll.

Assistant Park Naturalist Crowe cared for many details of the work, including assembling and mailing of Nature Notes, fumigating hides, preparing signs, lettering and numbering books, conferences on summer schedules, personnel and programs, observations on Mammoth Hot Springs, etc.

Junior Park Naturalist Kearns arrived on May 23rd and spent several days getting familiar with the Park and surroundings. The remainder of the month he has been illustrating Nature Notes and working on various assignments.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE MAIN_WYO.

SUPERINTENDENT

B. Nature Notes

The May-June issue of Nature Notes on Yellowstone History was mimeographed and mailed.

C. Library

Several days work on Library numbering and accessioning was done.

95 books in circulation
38 pamphlets and bulletins received
11 magazines received
2 books received.

D. Museums

Work: There has been some work done on the various museums in the park, removing shutters, replacing fixtures, etc., towards opening them for the season.

Accessions: Some work has been done on the accession card file.

E. Equipment

No equipment received.

F. Photographs

55 negatives in circulation.

G. Lantern Slides

108 slides in circulation.

H. Publicity Clippings

No work done.

I. Thermal Activity

Mammoth Hot Springs - Observations by Assistant Park Naturalist Crowe.

Angel Spring has greatly increased in flow during the month. The basins are all refilled with water and the flow extends on the lower slope to the foot-bridge. A small spring is flowing above the old terrace.

Baby Spring is flowing slightly the past few days.

Blue Spring is lightly cooler and the large pool is overflowing to the west into several cavities. The flow has increased from the crack on the west near Cupids Cave.

Cupids Cave shows increased flow with pool filled, that was empty a week ago.

Cleopatra Spring shows no change.

Hymen Spring is flowing from two outlets; the new one is about eight feet southwest from the old. Flow has increased.

Jupiter Springs not overflowing but the pool is filled with water.

Main Terrace shows quite a flow at the east and on the slopes. The basins are refilling.

Minerva Spring has a very small flow.

Mound Spring shows no change.

Opal Spring shows decrease in flow.

Orange Spring shows no change.

Soda Spring. The discharge of gas has increased.

White Elephant Back Terrace shows no change.

Palette Spring has increased and a narrow crack six feet in length has opened up on the upper side of the spring, through which water and gas is escaping.

Old Faithful

No report.

Norris Geyser Basin

The new boiling pool near Hurricane Vent is still quite active.

The area on Porcelain Hill is increasing in activity.

West Thumb

No noticeable changes for the month. All pools are quite low. Less activity than this time last year.

Yellowstone River

The mud pot in the Yellowstone River is now cleared of mud by the rising water in the river, and now a clear bubbling gas spring. Photographed by Dr. Bauer May 19, 1934, accompanies report.

Eureka Cove shows increased flow with pool filling, fish are most

Clear Ice Creek shows no change.

Glacier Melting is rising five to ten cubic ft a second
eight feet southward from the old. Flow has increased.

Juniper Spring not overflowing but the pool is fifty inch deep.

Rain Crevasse shows quite a flow at the west end as heavy storms
The banks are refilling.

Minerva Spring has a very small flow.

Round Spring shows no change.

Deer Spring seems decreased in flow.

Pleasant Grove seems to change.

Cole Spring. The discharge of gas has increased.

Table Mineral Hot Springs seems to change.

Pluto Spring has increased and a marine smell was from in the
morning.

Elk Meadow

is normal.

Bonita Canyon Pools

The new boiling pool near Rainbow Pool is still quite active.

The area on Moonstain Mill is increasing in activity.

Fish Creek

Some activity when rain came last week.

No noticeable changes for the month. All pools are quite low.

Yellowstone River

The ice jam in the Yellowstone River in the channel of and by the
[illegible] water in the river, and now a giant bubbling gas engine. Accompanied by
[illegible]. Some ice, then, accompanied by [illegible].

1. First view of Yellowstone Lake. Taken in connection with the preparation of "Trailside Notes" from Old Faithful to Mount Thumb. C. M. B.

2. A [illegible] River near the Mud Volcanoes. This spring was very muddy until the river became high enough to flood it. C. M. B.

J. Personnel

Park Naturalist Bauer was on duty all month. Assistant Park Naturalist Crowe was on duty all month. Junior Park Naturalist William L. Kearns reported for work on May 23rd and has been on duty since then. Miss Clara Raab, clerk-stenographer, has been on duty all month.

Respectfully submitted,

C. Max Bauer,
Park Naturalist

CC - The Director
Dr. Rumpus
Messrs. Russell & Hall
Museum

CMB:CR

7. [illegible]

[illegible] was on duty all night. [illegible] [illegible] was on duty all night. During [illegible] William R. Pierce [illegible] night and has been on duty all night. Miss Clara [illegible] [illegible] has been on duty all night.

Respectfully submitted,

[illegible]
R. [illegible]
[illegible]

RC - [illegible]
CT. [illegible]
[illegible]
[illegible]

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

CE OF THE SUPERINTENDENT

July 4, 1934

REPORT OF THE NATURALIST DEPARTMENT
For
JUNE, 1934

I. CURRENT OPERATIONS

A. Public Contact

Visitors: Some of the visitors of national importance are listed below:

Dr. Watson Davis, Science Service, Washington, D. C. Came in on June 30th and remained until after July 4th.
Miss Mabel Washburn, Science Teacher, Shortridge High School, Indianapolis, Ind.
Mr. Arthur Howard, New York University, N. Y.
Dr. Aven Nelson and wife, Ruth Ashton Nelson, Botanists of the University of Wyoming.
Dr. Carl P. Russell, Field Naturalist, N. P. S., June 16th to June 19th, inclusive.
National Bi-annual Convention Pi Beta Phi, 450 persons, from June 24th to June 30th, inclusive.
Mr. and Mrs. Tracy Shaw, Casper, Wyoming, June 29th.
The Inland Empire Hotel Association, June 20th - 22nd, were addressed by Ranger Naturalists.
Mr. Wm. E. Kirkham, Salt Lake, Field Executive Boy Scouts of America, 12th Region.
Miss Olive Pell, Artist, Cody.
Dr. C. W. Wilson of Vanderbilt, University
Mr. and Mrs. J. A. Deering, Santa Barbara, California Museum.
Special Parties:
Intermountain College, 15, Helena, Montana.
Boy Scouts, 30 Nampa, Idaho.
Mormon Party, 27, Indiana.
Mormon Stake, 200, Lovell, Wyoming.
Dr. Buwalda Party, 12, California Tech.

Lectures: The Naturalist programs at the various centers on the loop road began on June 18th. The accompanying table gives statistics on this work.

SUMMARY OF NATURALIST ACTIVITIES

Yellowstone National Park

For month ending June 30, 1934

Place	Field Trips No.	Field Trips Attendance	Auto Caravans No.	Auto Caravans No. Cars	Auto Caravans Attendance	Lectures No.	Lectures Attendance	Special Parties No.	Special Parties Attendance	Museum Attendance	Misc. Contacts No.	Totals Contacts Made	Publications Distributed No.	Publications Distributed $ Sales
Canyon	20	[illegible]				14	[illegible]	2	120			[illegible]		
Fishing Bridge	13	124	11	32	108	53	4132	1	6[illegible]	[illegible]		[illegible]		
Madison	4	57				40	1[illegible]	2	117	[illegible]		[illegible]		
Mammoth	19	418	15	172	[illegible]	33	[illegible]			[illegible]		11134		
Mount Washburn						1	1720					1720		
Norris	37	[illegible]								[illegible]		[illegible]		
Old Faithful	28	1560	14	681	2321	34	[illegible]	8	450	[illegible]		[illegible]		
West Thumb	20	[illegible]				10	472	1	190			[illegible]		
Totals 1933	126	2269	59	601	2149	169	11128	12	505	18971		35,020		
Totals 1934	171	10374	40	885	3004	185	25866	14	920	36428		76,[illegible]		

Park Visitors During Period: 39,694

Signed: Omax Bauer

Park Naturalist

SUMMARY OF NATURALIST ACTIVITIES

Yellowstone National Park

For week / month ending June 15, 1934
pre-season

Place	Field Trips No.	Field Trips Attendance	Auto Caravans No.	Auto Caravans No. Cars	Auto Caravans Attendance	Lectures No.	Lectures Attendance	Special Parties No.	Special Parties Attendance	Museum Attendance	Misc. Contacts No.	Totals Contacts Made	Publications Distributed No.	Publications Distributed $ Sales
Canyon														
Fishing Bridge														
Madison														
Mammoth										1800		1800		
Mount Washburn														
Norris														
Old Faithful														
West Thumb														
Totals 193			2	16	79					1337		1416		
Totals 193										1800		1800		

Park Visitors During Period: 20,396

Signed: Omax Bauer

Park Naturalist

1. Guided Trips

1933 Guided Trips	126	Attendance	2,269
1934 Guided Trips	171	Attendance	10,374

2. Lectures

1933 Lectures	169	Attendance	11,126
1934 Lectures	185	Attendance	25,866

3. Auto Caravans

1933 Auto Caravans	59	Attendance	2,149
1934 Auto Caravans	40	Attendance	3,004

4. Special Parties

1933 Parties	12	Attendance	505
1934 Parties	14	Attendance	920

5. Museum

1933 Museum		Attendance	18,971
1934 Museum		Attendance	36,428

B. ~~Ranger-Naturalist Staff~~

The following Ranger-Naturalists reported as indicated and served during the month:

Harlow B. Mills, Mammoth, June 16th.
Harvey E. Stork, Mammoth, June 16th.
C. Gordon Frodine, Canyon, June 16th.
Philip Fix, Canyon, June 16th.
Harry M. Kelly, Fishing Bridge, June 16th.
Hollin Moore, Fishing Bridge, June 16th.
E. T. Bodenberg, Fishing Bridge, June 16th.
Arthur Nash, Relief, June 16th.
Chas. Bowman Hutchins, Relief, June 16th.
Howard Stagner, Old Faithful, June 16th.
Arthur McIntosh, Old Faithful, June 16th.
David Condon, Old Faithful, June 16th.
Truston Peery, West Thumb, June 20th.
Willis Smith, West Thumb, June 20th.
W. B. McDougall, Mammoth, June 27th.

Frank Oberhansley, Senior Ranger Naturalist, reported for work June 4th and was on duty the remainder of the month.

Herbert Lystrup, Canyon, began on June 16th, but was called home due to the death of his father on June 29th.

II. PERMANENT PROJECTS

A. Administrative

The pre-season trip of Ranger-Naturalists occupied much attention. The permanent staff prepared for this in considerable detail and the three days with the Senior Ranger Naturalists and the new Ranger-Naturalists was a decided success.

June 1, 1934

MEMORANDUM TO THE RANGER NATURALISTS:
#6

DAILY SCHEDULE

The following is the schedule of guide and lecture service to be carried out under the supervision of the Naturalist Department for the season of 1934. This schedule is subject to change if the season's travel does not warrant. Every effort will be put forth to serve the small as well as the large parties.

WE ARE REQUESTING THAT ALL LECTURES BE RESTRICTED TO 30 MINUTES.

MAMMOTH

ALL WALKING PARTIES START FROM LIBERTY CAP

CARAVANS START FROM MUSEUM

MUSEUM HOURS 8:00 a.m. to 8:00 p.m.

All day Hike (Sepulcher Mtn. or Osprey Falls)	Each Wednesday 7:00 a.m.
Nature Walk (Terrace-Forest Trail)	8:15 a.m. --- 10:30 a.m.
Buffalo-Terrace (Auto caravan leaves museum for buffalo corral and terraces.)	9:00 a.m.
Terrace Walks (40 min. each)	1:30 p.m. --- 4:00 p.m.
Nature Talk; Lodge Recreation Hall (illustrated)	7:45 p.m. --- 8:15 p.m.
Campfire Talk and Entertainment-Illustrated-Mammoth Auto Camp.	8:00 p.m. --- 9:00 p.m.
Evening Game Stalk (Drive your own car)	7:00 p.m. --- 8:00 p.m.

NORRIS

MUSEUM HOURS 8:00 a.m. to 5:00 p.m.

The museum hours will depend somewhat upon the number of visitors; the museum may have to be opened earlier or later.

Basin Walk-Morning 10:00 a.m. --- 11:00 a.m.
Afternoon - according to bus schedules

MADISON

MUSEUM HOURS 8:00 a.m. to 5:00 p.m.

The museum hours are subject to the same regulations as Norris.

Miscellaneous hikes - Purple Mountain, National Park Mountain, etc.
(Time and objective determined by visitors and ranger duties)
Campfire Talk - (Time optional dependent upon crowd, early hour preferred.)

OLD FAITHFUL

ALL WALKS START FROM OLD FAITHFUL GEYSER CONE

MUSEUM HOURS 8:00 a.m. to 9:30 p.m.

Nature Walk-Observation Point Trail	8:00 a.m. --- 10:30 a.m.
Greater Geysers Walk	8:30 a.m. --- 11:00 a.m.
Chasing Geysers (Auto caravan leaves museum for geyser basin)	2:00 p.m. --- 4:00 p.m.
Bear Lecture - at Bear Feeding Ground	7:15 p.m. --- 7:45 p.m.
Museum Lecture - Illustrated - Old Faithful Amphitheatre	8:15 p.m. -- 8:45 p.m.
Illuminated eruption of Old Faithful	9:00 p.m.
Museum Talks	3:00 p.m. and 4:00 p.m.

WEST THUMB

Hot Spot Walks (time to be determined by bus schedule)	
Campfire Talk - Thumb Camp Ground	7:30 p.m. --- 8:30 p.m

FISHING BRIDGE

MUSEUM HOURS 8:00 a.m. to 8:00 p.m.

Nature Stroll - Lakeview Trail	8:00 a.m. -- 10:30 a.m.
Lakeshore Drive - Auto caravan from museum to Fish Hatchery and Natural Bridge	2:00 p.m. -- 4:00 p.m.
Campfire Talk (Illustrated) and Entertainment	8:00 p.m. -- 9:00 p.m.
Museum Talks	10:00 a.m. -- 10:30 a.m.
	3:00 p.m.
	4:00 p.m.

CANYON

Nature Walk - Uncle Tom's Trail (from Lodge)	8:30 a.m. -- 11:00 a.m.
Nature Walk - Red Rock Trail (from Ranger Station and Hotel)	8:30 a.m. -- 11:00 a.m.
Ranger Naturalist Service at Grand View and Artist Points	1:30 p.m. -- 4:00 p.m.
Bear Lecture (Bear Feeding Grounds)	7:00 p.m. -- 7:30 p.m.
Game Stalk (Drive your own car)	7:30 p.m. -- 8:30 p.m.
Nature Talk - Illustrated - Canyon Lodge Lobby	7:20 p.m. -- 8:00 p.m.

MT. WASHBURN

Lectures to bus visitors and others; time subject to bus schedules; number of lectures determined by crowd at any one time.

Please make no changes in schedule without approval of the Park Naturalist.

C. Max Bauer,
Park Naturalist

SCHEDULE OF TALKS FOR CCC CAMPS

by Rangers and Ranger-Naturalists

CANYON CAMP

Monday, June 25, 7:30 p.m. "The Story of the Canyon and the Lake" by Assistant Naturalist George Crowe.
" July 2, " "Fishing and Fish Culture" by Ranger Guy McCarty.
" " 9, " "Winter Ranger Works and Patrols" by Ranger John Jay.
" " 16, " "Forest Protection" by Ranger Don Kipp.
" " 23, " "Summer Ranger Works" by Ranger George Walker.
" " 30, " "Wild Life Observations" by Ranger Frank Childs.

GALLATIN CAMP

Monday, June 25, 7:30 p.m. "Winter Ranger Work and Patrols" by Ranger Rudolph Grimm.
" July 2, " "Forests of the Park" by Ranger Curtis Skinner.
" " 9, " "The Unseen Life of the Park" by Junior Naturalist William Kearns.
" " 16, " "Indian Tribes Who Came to Yellowstone" by Ranger-Naturalist Willis Smith.
" " 23, " "Fish and Fish Culture" by Ranger Rudolph Grimm.
" " 30, " "Game Animals of the Park" by Ranger-Naturalist Dave Condon.

OLD FAITHFUL CAMP

Tuesday, June 26, 7:30 p.m. "Winter Ranger Work and Patrols" by Ranger Al Elliott.
" July 3, " "Fish and Fish Culture" by Ranger Guy McCarty.
" " 10, " "Geysers and How They Work" by Ranger-Naturalist Frank Oberhansley.
" " 17, " "Game Animals of the Park" by Ranger-Naturalist Dave Condon.
" " 24, " "History of Ranger Organization" by Ranger Curtis Skinner.
" " 31, " "Chief Joseph and His Band" by Ranger-Naturalist Willis Smith.

SNAKE RIVER CAMP

Tuesday, June 26, 7:30 p.m. "Story of Mt. Sheridan and Yellowstone Lake" by Ranger-Naturalist T. Peery.
" July 3, " "Winter Ranger Work and Patrols" by Ranger Sheldon Dart.
" " 10, " "Forest Protection" by Ranger Leon Evans.
" " 17, " "Game Animals of the Park" by Ranger W. S. Chapman.
" " 24, " "Unseen Life of the Park" by Junior Naturalist William Kearns.
" " 31, " "The Birds of Yellowstone" Ranger Frank Anderson.

MAMMOTH CAMP

Wednesday, June 27, 7:30 p.m. "History of the Ranger Organization" by Assistant Chief Ranger George Miller.
" July 4, " "The Story of the Mammoth Hot Springs" by Assistant Naturalist George Crowe.
" " 11; " "The Value of the CCC Work in the Park" by Chief Ranger George Baggley.
" " 18, " "Game Animals of the Park" with picture by Assistant to the Superintendent Joe Joffe.
" " 25, " Wild Life Observations" Ranger Frank Childs.
" Aug. 1, " "Winter Ranger Work and Patrols" by Ranger Maynard Barrows.

LAKE CAMP

Wednesday, June 27, 7:30 p.m. "Winter Ranger Work and Patrols" by Ranger George Walker.
" July 4, " "The Story of Yellowstone Lake" by Ranger-Naturalist Dr. Kelly.
" July 11, " "Game Animals of the Park" with pictures by Assistant to the Superintendent Joe Joffe.
" " 18, " "Summer Ranger Works" Ranger Tom Garry.
" " 25, " "Forests of the Park" by Ranger Don Kipp.
" Aug. 1, " "The Flowers of Yellowstone" by Ranger-Naturalist Dr. Bodenberg.

George C. Crowe,
Assistant Park Naturalist

Assistant Park Naturalist Crowe has been assigned the work of scheduling lectures each week for each of the six C C C camps in the Park by N. P. S. men. Mr. Crowe also does a great deal of supervising of Naturalist programs.

Junior Park Naturalist Loomis has been assigned the work of Publication Sales, special parties and some relief work.

B. Nature Notes

Plans for a number on Wild Life Conservation are being made.

C. Library

120 books in circulation
18 pamphlets and bulletins received
11 magazines received
8 books received.

D. Museums

Work: The history case at Mammoth has been worked out to show the development of the Park Administration here under the N. P. S. by Mr. Crowe.

Accessions: Miss Raab has worked 6 days on catalogue cards.

E. Equipment

No equipment received.

F. Photographs

4 prints in circulation
3 negatives in circulation.

G. Lantern Slides

719 slides in circulation.

H. Publicity Clippings

No work done.

I. Thermal Activity

Mammoth Hot Springs - Observations by Assistant Park Naturalist Crowe

Assistant Park Naturalist Crowe has been assigned the work of [illegible] in the [illegible] by [illegible]. Mr. Crowe also [illegible] vising of Naturalist programs.

Junior Park Naturalist Hearns has been assigned the work of [illegible] Sales, special parties and some relief work.

B. Nature Notes

Plans for a number on Wild Life Conservation are being made.

C. Library

120 books in circulation
18 pamphlets and bulletins received
11 magazines received
8 books received.

D. Museum

Work: The history case at Mammoth has been worked out to show the development of the Park Administration [illegible] under the N. P. S. by Mr. Crowe.

Accessions: Miss Raab has worked 6 days on catalogue cards.

E. Equipment

No equipment received.

F. [illegible]

4 prints in circulation
8 negatives in circulation.

G. Lantern Slides

719 slides in circulation.

H. [illegible]

No work done.

I. [illegible]

Mammoth Hot Springs - Observations by Assistant Park Naturalist Crowe

Angel Terrace The flow of water has been constant, but more of the basins are filled on the lower slope. The coloring is especially fine.

Baby Spring has started flowing again.

Blue Springs have increased in flow and the water is spreading over the formation to the north toward Mound Terrace.

Cleopatra Spring shows no change.

Cupids Cave has decreased in flow.

Hymen Spring has increased in flow and the terraces and pools are more beautiful than usual.

Jupiter Spring shows no overflow.

Main Terrace The spring is overflowing for thirty feet along the old cracks and new basins are forming.

Minerva Terrace Two pools are full of water but the flow is the same as last month.

Mound Spring Flow has increased to the north but decreased on the east slope.

Narrow Gauge shows no activity.

Opal Spring Flow is decreasing.

Orange Spring Mound No change.

Palette Spring Heavy flow continues and the new crack above the spring is still in evidence.

White Elephants Back shows no change.

J. Personnel

The permanent personnel, consisting of Park Naturalist Bauer, Assistant Park Naturalist Crowe, and Junior Park Naturalist Moorns, were on duty all month. Miss Clara Rask, temporary clerk-stenographer, was on duty for all except one day of the month, and spent nine days working in the Main Office.

Victor J. Lunt, caretaker at Old Faithful Museum, June 4th to June 30th.

W. Verde Watson, caretaker at Mammoth Museum June 4th to June 30th.

James R. Hamilton, caretaker Fishing Bridge Museum, June 11th to June 30th.

The personnel of the Ranger-Naturalist staff has been mentioned in the first part of this report.

Respectfully submitted,

C. Max Bauer

C. Max Bauer,
Park Naturalist

CC Director
Dr. H. C. Bumpus
Ansel F. Hall and Dr. C.P.Russell
Museum

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OF THE SUPERINTENDENT

NATURALIST DEPARTMENT

Summary Report October 1, 1933 to June 30, 1934

There were several changes in the staff of this department during this period. First, Wilfred (Caesar) Mead, Janitor, was transferred to the Department of Plumbing and Sanitation on Oct. 23rd and assigned full time janitor work. Mrs. Herma A. Baggley, Junior Park Naturalist, resigned to take effect at the end of the calendar year. She remained on duty until December 16th. William E. Kearns, new Junior Park Naturalist, reported for work on May 23rd. The permanent staff on June 30, 1934 consisted of:

Park Naturalist	C. Max. Bauer
Assistant Park Naturalist	George C. Crowe
Junior Park Naturalist	William E. Kearns

The summer staff for June, 1934 included 18 Ranger-Naturalists, 1 clerk-stenographer and 3 laborers or caretakers for the museums. Three of the Ranger-Naturalists were designated Senior Ranger-Naturalists to supervise the activities at Fishing Bridge, Old Faithful and Mammoth Hot Springs museums. All of the museums were closed before the first of October, 1933. The opening dates for the museums are given below:

Mammoth Museum	June 4th
Norris Museum	June 16th
Madison Museum	June 20th
Old Faithful Museum	June 16th
Fishing Bridge Museum	June 16th

The daily hours for each museum are as follows:

Mammoth Museum	8:00 A.M. to 8:00 P.M.
Fishing Bridge Museum	8:00 A.M. to 8:00 P.M.
Norris Museum	8:00 A.M. to 5:00 P.M.
Madison Museum	8:00 A.M. to 5:00 P.M.
Old Faithful Museum	8:00 A.M. to 9:30 P.M.

An outside amphitheater for the Mammoth Camp Ground is being constructed on the hillside above the camping area. Most of this work is being done by the C.C.C. In June a small amphitheater with seating capacity for 75 persons, and a fireplace, was constructed near the Madison Museum at a point from which National Park Mountain is visible.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

[illegible]

[illegible]

[illegible] Junior Park Naturalist, resigned to take effect at the end of the calendar year. She remained on duty until December 16th. William E. Kearns, now Junior Park Naturalist, reported for work on May 23rd. The permanent staff on June 30, 1934 consisted of:

Park Naturalist	C. Max. Bauer
Assistant Park Naturalist	George C. Crowe
Junior Park Naturalist	William E. Kearns

[illegible] Three of the Ranger-Naturalists were designated senior Ranger-Naturalists to supervise the activities at Fishing Bridge, Old Faithful and Mammoth Hot Springs museums. All of the museums were closed before the first of October, 1933. The opening dates for the museums are given below:

Mammoth Museum	June 4th
Norris Museum	June 16th
[illegible]	[illegible]
[illegible]	[illegible]
Fishing Bridge Museum	June 16th

The daily hours for each museum are as follows:

Mammoth Museum	8:00 A.M. to 8:00 P.M.
[illegible]	[illegible]
[illegible]	8:00 A.M. to 5:00 P.M.
[illegible]	8:00 A.M. to 5:00 P.M.
[illegible]	8:00 A.M. to 9:30 P.M.

[illegible]

C.W.A.

Further improvements have been carried on at the Headquarters Museum. Through cooperation of the ~~C. C. C.~~ the south end of the basement was excavated during the winter and a concrete floor placed in it. This room is for the storage of study collections of skins of birds and animals and the herbarium. It is also to be used for a laboratory where biological and geological work may be carried on by research workers in Yellowstone.

The preparation of a relief map showing the areal geology, and placing of it in the Mammoth Museum.

The placement of a large relief map in the geology room of the Fishing Bridge Museum for use in geology talks.

The continuation of the library cataloguing.

Organizing the accession material and continuing the cataloguing of same.

The improvement of Ranger-Naturalist personnel.

The preparation of a relief schedule so that Ranger-Naturalists will have regular relief during the summer season amounting to one day a week.

The placement of a Ranger-Naturalist at West Thumb Ranger Station has greatly improved the work at that point in that there is a daily nature walk to Duck Lake and return, well organized camp fire program with Naturalist lectures every evening serving from 100 to 150 campers. On the formation walk over the thermal area a more detailed description of the activities there is presented by an experienced geologist.

Furnishing special Naturalist services to the various conventions in session in the Park.

The pre-season lecture program of the permanent Naturalists in the C. C. C. Camps and the continuation of these lectures with the aid of Rangers and Ranger-Naturalists speaking one night a week in each of the six Camps, on educational subjects pertaining to Yellowstone National Park.

Beginning the interpretation of the natural history of the Park by motion pictures.

Cooperation both by consultation and field trips with the Bureau of Public Roads and the Park Engineers relative to road location in the Park.

Continuation of the research work of Dr. Arthur Howard relative to the geology of the Tower Falls Region.

Further improvements have been carried on at the headquarters museum. Through cooperation of the C. C. C. the south end of the basement was excavated during the winter and a concrete floor placed in it. This room is for the storage of study collections of skins of birds and animals and the herbarium. It is also to be used for a laboratory where biological [illegible] may be carried on by [illegible] in [illegible].

The preparation of a relief map showing the areal geology, and placing of it in the Mammoth Museum.

The placement of a large relief map in the geology room of the Fishing Bridge Museum for use in geology talks.

The continuation of the library cataloguing.

[illegible] of same.

The improvement of Ranger-Naturalist personnel.

The preparation of a relief schedule so that Ranger-Naturalists will have regular relief during the summer season amounting to one day a week.

The placement of a Ranger-Naturalist at Mount Hague Station has greatly improved the work at that point in that there is a daily nature walk to Buck Lake and return, well organized [illegible] program with Naturalist lectures every evening [illegible] to [illegible]. In the formation work over the thermal area a more [illegible] of the activities there is presented by an experienced geologist.

Furnishing special Naturalist services to the various conventions in session in the Park.

The pre-season lecture program of the permanent Naturalists in the C. C. C. Camps and the continuation of these lectures with the aid of Rangers and Ranger-Naturalists speaking one night a week in each of the six Camps, on educational subjects pertaining to Yellowstone National Park.

Beginning the interpretation of the natural history of the Park on motion pictures.

Cooperation both by consultation and field trips with the Bureau of Public Roads and the Park Engineers relative to road location in the Park.

[illegible] the geology of the Tower Falls Region.

Cooperation with the Livingston Round-up in presenting an historical pageant of Yellowstone Park from 1808 to the present.

Securing the cooperation of the Princeton School of Field Geology in supplying research workers to study problems in Yellowstone National Park.

Monthly observations of the geysers and hot springs have been made throughout the year and the information carded.

NATURALIST DEPARTMENT

Activities from October 1 to June 30, inclusive

Station	Field Trips: No.	Field Trips: Att.	Lectures: No.	Lectures: Att.	Museum: Att.	Auto Caravans: No.	Auto Caravans: Cars	Auto Caravans: Att.	Sp. Parties: No.	Sp. Parties: Att.
Canyon	50	6388	14	2920					2	120
Fishing Bridge	13	124	83	4152	6418	11	32	108	1	43
Madison	4	57	40	1649	2885				2	117
Mammoth	19	418	133	14307	9883	15	172	575		
Mount Washburn				1720						
Norris	37	889			4434					
Old Faithful	28	1560	54	12895	14608	14	681	2321	8	430
West Thumb	20	938	10	472					1	190
Total	171	10374	284	38115	38228	40	885	3004	14	920

TOTAL CONTACTS Oct. 1 to June 30, 1933 49,084
TOTAL CONTACTS Oct. 1 to June 30, 1934 90, 641

Respectfully submitted,

C. Max. Bauer,
Park Naturalist

Activities from October 1 to June 30, inclusive

Station	[illegible]										
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Canyon	30	6588	14	2220						2	120
Fishing Bridge	13	124	53	4152	6418	11	32	108		1	65
Madison	4	57	40	1649	9885					2	117
Mammoth	19	418	135	14507	9885	15	172	575			
Mount Washburn				1720							
Norris	37	889			4434						
Old Faithful	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
West Thumb	20	935	10	472						1	160
Total	171	10074	284	38115	[illegible]	40	[illegible]	3004		14	[illegible]

TOTAL CONTACTS Oct. 1 to June 30, 1933 [illegible]
TOTAL CONTACTS Oct. 1 to June 30, 1934 [illegible]

Respectfully submitted,

C. Max. Bauer,
Park Naturalist

87178

UNITED STATES
DEPARTMENT OF THE INTERIOR
National Park Service
Washington

OFFICE ORDER NO. 274.

The Secretary of the Interior has issued instructions that the Annual Reports of the various bureaus of the Department of the Interior be in his hands by September 1, 1934. In order to meet these instructions, the heads of the various field units of the National Park Service hereby are directed to prepare their annual reports at once and mail them in time to reach Washington by August 15.

Since reports prepared so early can not cover the construction season, it has been decided in the interest of uniformity in the various bureau reports to close the National Park Service report June 30, 1934, the end of the fiscal year, instead of covering the season to September 30 for construction and tourist activities as in the past. Therefore, comparative travel figures for the period October 1, 1933 to June 30, 1934, should be furnished in the report.

In addition, travel figures for the year ended September 30, 1934, should be wired this office at the close of September 30, as has been done in past years. This will make possible the continuation of the Service's comparative travel statistical tables.

Two or three photographs of important new activities should accompany the report.

PLEASE ACKNOWLEDGE RECEIPT OF THESE INSTRUCTIONS.

A. E. Demaray,
Acting Director.

Please prepare your part of report

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

August 4, 1934

REPORT OF THE NATURALIST DEPARTMENT
For
JULY, 1934

I. CURRENT OPERATIONS

A. Public Contact

Visitors: Some of the visitors of more importance included:

Director and Mrs. Cammerer of Washington, D. C.
Mr. Becker, Engineer, of Yorkshire, England.
Engineer Kittredge of San Francisco.
Mr. Gable of the Washington Office.
Judge Jos. Haines of San Diego.
Dr. C. L. Harris of St. Louis, Bacteriologist.
Mr. Robinson of St. Louis.
Dr. C. N. Fenner of the Geophysical Laboratory, Washington, D. C.
Col. W. T. Graham, 1st. Lieutenant under Capt. Hitchcock, 1885.
Mr. Earl Trager and party.
Dr. I. Lubin of the Labor Board and Dr. H. Talamo.
Maj. J. Rultaud of London, England, Color Photographer.
L. E. Benedict, West Bend, Wisconsin, Geologist.
W. S. Chapman, Animal Photographer and Writer.
Mr. Paul [illegible]dams (Biologist for the Intermountain Station.)
Members of the Princeton Field School.

Tours: DeLuxe See America Tours, W. S. Stanford.
University Tours, 18 busses, 600 teachers.
Milwaukee Hikers 25.
Cleveland Y. M. C. A. Party 16.
Niagra Falls Y. M. C. A. Party 10.
Birmingham, Alabama, Y. M. C. A. Party 15.
Parkhill Tour of Illinois, 90.
Red Bird Geography Tour, Prof. Lathrop, Normal, Ill., 32.
Tauck Vacation Tours, Patterson, N. J., August Bingler, Manager, 13.
Talbotts School Boy Tour, Dayton, Ohio, 40.
Oglethorpe University Tour, 100.

Conventions: Kappa Kappa Gamma.
Montana Bankers Association, Canyon.
Mail Clerks Convention.

Lectures:

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

Sunday, July 22nd, Mr. Crowe visited Luccock Park in the Yellowstone Valley where the Epworth League Institute of Montana was in session. He addressed 450 regarding Yellowstone Park and assisted Dr. McAdams on a nature walk.

Special effort has been made to serve the teachers' tours, boy scouts, Y. M. C. A. groups and girl organizations as they are all interested in the natural history of the Park.

The University Tours 600 members was too large to be absorbed in the regular programs so naturalists handled them as special parties at all points.

Church services were held at Old Faithful and Fishing Bridge several times during the month, both Catholic and Protestant.

The table below gives statistics as to the number of contacts made this year as compared with last year.

1.	Guided Trips			
	1933 Guided Trips	375	Attendance	12,138
	1934 Guided Trips	472	Attendance	44,871
2.	Lectures			
	1933 Lectures	2,179	Attendance	96,408
	1934 Lectures	526	Attendance	130,338
3.	Auto Caravans			
	1933 Auto Caravans	122	Attendance	7,346
	1934 Auto Caravans	129	Attendance	12,560
4.	Special Parties			
	1933 Parties	52	Attendance	3,665
	1934 Parties	62	Attendance	6,834
5.	Museum			
	1933 Museum		Attendance	81,070
	1934 Museum		Attendance	127,164

B. Ranger Naturalist Staff

Mr. Hutchins was away from July 13 to July 31, inclusive.

Mr. Lystrup resigned because of the unexpected death of his father. Verde Watson replaced Mr. Lystrup as Ranger-Naturalist and took up his duties at Norris Museum on July 6th. Mr. Spalding was transferred as Senior Ranger-Naturalist to Canyon and Mr. Fredine was transferred to Mammoth Museum.

Sunday, July 22nd, Mr. Crowe visited Luccock Park in the Yellowstone Valley where the [illegible] in a session. He addressed 450 regarding Yellowstone Park and assisted Dr. McAdams on a nature walk.

Special effort has been made to serve the teachers' tours, boy scouts, Y. M. C. A. groups and girl organizations as they are all interested in the natural history of the Park.

The University Tours 800 members was too large to be absorbed in the regular programs so naturalists handled them as special parties at all points.

Church services were held at Old Faithful and Fishing Bridge several times during the month, both Catholic and Protestant.

The table below gives statistics as to the number of contacts made this year as compared with last year.

1.	[illegible]			
	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]
2.	[illegible]			
	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]
3.	[illegible]			
	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]
4.	[illegible]			
	1933 Parties	52	Attendance	3,[illegible]
	1934 Parties	62	Attendance	6,[illegible]
5.	[illegible]			
	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]	[illegible]	[illegible]
6.	[illegible]			

Mr. [illegible] from July 13 to July [illegible], [illegible].

Mr. [illegible] replaced Mr. Lystrup as Ranger-Naturalist and [illegible] Museum on July 6th. Mr. Spaulding was transferred as Ranger-Naturalist to Canyon and Mr. Prodine [illegible].

SUMMARY OF NATURALIST ACTIVITIES

~~week~~
For ~~month~~ ending July, 1934
~~season~~

Yellowstone National P

Place	Field Trips: No.	Field Trips: Attendance	Auto Caravans: No.	Auto Caravans: Cars	Auto Caravans: Attendance	Lectures: No.	Lectures: Attendance	Special Parties: No.	Special Parties: Attendance	Museum: Attendance	Misc. Contacts: No.	Totals: Contacts Made	Publications Distributed: No.	Publications Distributed: $ Sales
Canyon	121	23094	30	728	2442	59	26373	10	1179			53088		
Fishing Bridge	30	638	29	173	581	126	20769	10	708	22127		44823		
Madison	4	76				153	7403	[illegible]	513	12759		20551		
Mammoth	167	5446	39	716	2304	74	7043	11	436	28227		43456		
Mount Washburn							9074					9074		
Norris		3866								16371		20237		
Old Faithful	62	7354	31	1986	7233	83	54921	22	3923	47700		121131		
West Thumb	88	4397				31	4755	6	275			9427		
Totals 1933	575	12138	122	2132	7346	2179	96408	52	3665	81070		200628	2428	$817.65
Totals 1934	472	44871	129	3603	12560	526	130338	62	6834	127164		321767		

Park Visitors During Period: 89,523

Signed: Orma Barnes

Park Naturalist

SUMMARY OF NATURALIST ACTIVITIES

###ek
For month ending June, 19#4
#####on

Yellowstone National Park

Place	Field Trips: No.	Field Trips: Attendance	Auto Caravans: No.	Auto Caravans: No. Cars	Auto Caravans: Attendance	Lectures: No.	Lectures: Attendance	Special Parties: No.	Special Parties: Attendance	Museum: Attendance	Misc. Contacts: No.	Totals: Contacts Made	Publications Distributed: No.	Publications Distributed: $ Sales
Canyon														
Fishing Bridge													166	50.75
Madison														
Mammoth													513	139.55
Mount Washburn														
Norris														
Old Faithful													449	182.45
West Thumb														
Totals 193 3													560	174.45
Totals 193 4													1128	372.75

Park Visitors During Period: _____

Signed: Orma Bauer
Park Naturalist

II. PERMANENT PROJECTS

A. Administrative

The program of activities continued through the month as set up in June, with a few changes as to time. A number of all-day hikes were conducted by Wm. Kearns, Junior Park Naturalist.

The C. C. C. Camps schedule of lectures was subject to a few changes due to fire call and transfer of Rangers. These lectures will be continued in August and September.

Dr. Bauer edited the annual report.

B. Nature Notes

Not issued this month.

C. Library

139 books in circulation.
39 pamphlets and bulletins received.
6 magazines received.
3 books received and accessioned.

D. Museums

Work: Roadside exhibits were cleaned and overhauled by Mr. Crowe. Rhyo-Travertine and Tuff exhibits were completed with the addition of enlargements. A careful count was made for a day at Rhyo-Travertine and Obsidian Exhibits.

Accessions: Miss Raab has worked 11 days on catalogue cards.

E. Equipment

Received 3000 steel insect pins in sizes #2, #3, and #4 and 24 Schmitt Boxes.

F. Photographs

3 prints in circulation.
3 negatives in circulation.

G. Lantern Slides

Accessioned 87 slides; 38 of these were received from Ansel Hall; 33 were historical slides received from George M. Wright and 16 were song slides made by Haynes.

843 slides were in circulation.

50 duplicate slides are being colored.

II. PERMANENT PROJECTS

A. Administrative

The program of activities continued through the month as set up in June, with a few changes as to time. A number of all-day hikes were [illegible].

The C. C. C. Camps schedule of lectures was subject to a few changes due to fire call and transfer of Rangers. These lectures will be continued in August and September.

Dr. Bauer edited the annual report.

B. Nature Notes

[illegible].

C. [illegible]

[illegible]:
39 pamphlets and bulletins received.
4 magazines received.
5 books received and accessioned.

D. [illegible]

[illegible] Roadside exhibits were cleaned and overhauled by Mr. [illegible] dition of enlargements. A careful count was made for a day at Rhyo-Travertine and Obsidian Exhibits.

Accessions: Miss Raab has worked 11 days on catalogue cards.

E. [illegible]

Received 3000 steel insect pins in sizes #2, #3, and #4 and 24 Schmitt Boxes.

F. [illegible]

3 prints in circulation.
3 negatives in circulation.

G. [illegible]

Accessioned 87 slides; 38 of these were received from Ansel [illegible] were song slides made by Haynes.

843 slides were in circulation.

[illegible] slides are being [illegible].

H. Publicity Clippings

Numerous stories have been given to Mr. Mader, publicity man, by the Ranger-Naturalists and permanent staff.

I. Thermal Activity

Mammoth Hot Springs - Observations by Assistant Park Naturalist Crowe.

Angel Terrace No noticeable change from June.

Baby Spring is slowly increasing, affecting Cupids Cave without doubt.

Blue Springs are increasing again and the flow is shifting to the south. A new pool (small) has formed on the west edge of the formation.

Cleopatra Spring has decreased slightly. The coloring is nearly all brown shades.

Cupids Cave has decreased greatly. Over a third of the flow has ceased and algae has died out.

Hymen Spring has also decreased but the terraces are still very fine in color.

Jupiter Terrace A portion of the terrace is colored at the extreme north near Pulpit Terrace, the water flowing from Blue Springs.

Main Terrace shows more activity as a number of new basins are noticeable.

Minerva shows a decided increase in flow, but not much color as yet.

Mound Spring No change.

Narrow Gauge is overflowing a little.

Opal Spring has increased over June.

Orange Spring Mound shows a greater flow than a year ago.

White Elephant Back is overflowing at several points.

Palette Spring shows no change; strong flow continues.

Numerous stories have been given to Mr. Meder, publicity man, by the Ranger-Naturalists and permanent staff.

Old Faithful District - Observations by Frank Oberhansely.

Rainbow Pool is inactive and not very hot; erupted last season; now down in level; less water than ever.

Green Spring across Iron Creek from Rainbow is very hot and active; more so than in several seasons; possible exchange of action.

Old Handkerchief Pool is very inactive, very little water and no convective currents.

J. Personnel

The permanent personnel, consisting of Park Naturalist Bauer, Assistant Park Naturalist Crowe, and Junior Park Naturalist Kearns, were on duty all month. Miss Clara Haab, temporary clerk-stenographer, was on duty all month.

Victor J. Lunt, caretaker at Old Faithful Museumwas on duty all month.

W. Verde Watson was caretaker at Mammoth Museum until July 6th when Julian Vogt took over his duties and Mr. Watson received his appointment as Ranger-Naturalist at Norris.

James R. Hamilton, caretaker Fishing Bridge Museum, was on duty all month.

Respectfully submitted,

C. Max. Bauer,
Park Naturalist

CC Director
Dr. H. C. Bumpus
Ansel F. Hall and Dr. C. P. Russell
Museum

[illegible]ct - Observations by Frank Oberhansely.

[illegible] Pool is inactive and not very hot; erupted last season; now down in level; less water than ever.

Green Spring across Iron Creek from Rainbow is very hot [illegible]

[illegible] Pool is very inactive, [illegible] and no convective currents.

[illegible]

The permanent personnel, consisting of Park Naturalist Bauer, [illegible]

Victor J. Lunt, caretaker at Old Faithful Museum was on duty all month.

W. Verde Watson was caretaker at Mammoth Museum until July 6th when Julian Vogt took over his duties and Mr. Watson received his appointment as Ranger-Naturalist at Norris.

[illegible]

[illegible]

C. Max. Bauer,
[illegible]

CC Director
Dr. H. C. [illegible]
Ansel F. Hall and Dr. C. P. Russell
Museum

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OF THE SUPERINTENDENT

September 4, 1934

REPORT OF THE NATURALIST DEPARTMENT
FOR
AUGUST, 1934

I. CURRENT OPERATIONS

A. Public Contact

Visitors: Special visitors contacted include the following:

Prof. Rollin T. Chamberlin, University of Chicago.
Prof. Wm. Taylor Thom, Princeton University.
Prof. Owen I. Jones, Cambridge University, England.
Prof. Walter Bucher, University of Cincinnati.
Dr. H. D. Parker and son, Bell Telephone Laboratories.
Prof. and Mrs. Frederick K. Morris, Mass. Inst. Tech.
Gerda Lundt, Member of Parliament, Copenhagen, Denmark.
John B. Griffing, Educational Adviser, C.C.C., Presidio, San Francisco, California.
Prof. and Mrs. A. L. Mellander, New York City.
Dr. E. P. Meinecke, Department of Agriculture
A. C. Howard, Philadelphia.
Dr. Wright, Cornell University.
Ned Frost, with game pictures.
John Provol, former soldier.
Mr. Robert Fechner, Director E.C.W.
J. R. Rupt, Pueblo, Colorado.
Attorney General Cummings, U. S. Department of Justice.
Mr. Blair, Department of Justice.
Bruce Kramer, Washington, D. C.
Ernest Clegg, Bureau of Inv.
Bishop Fox, Montana
Dr. L. L. Loofbourow, Modesto, California.
Senator Gerald P. Nye, North Dakota.

Tours: Scenic America
Omnibus College
Georgia Caravan
Drake University Students
Antioch College, Ohio, 10.
Western Educational Tours, N. J., 40.
Talbott Tours, Dayton, Ohio, 40.
Transylvania College, Ky., 150.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

Lectures: Each of the six C.C.C. Camps in the Park were given one special lecture each week by a Ranger-Naturalist or a Ranger. These contributed to their general education and entertainment. At a conference of C.C.C. educational advisers at the Nez Perce Camp with Mr. John R. Griffing presiding it was stated that this contribution of our Naturalist Department in Yellowstone was the outstanding part of the program here.

Comparative statistics of contacts for August 1933 and 1934 are as follows:

1. Guided Trips

1933	Guided Trips	384	Attendance 13,814
1934	Guided Trips	593	Attendance 17,464

2. Lectures

1933	Lectures	1790	Attendance 78,211
1934	Lectures	484	Attendance 119,868

3. Auto Caravans

1933	Auto Caravans	107	Attendance 6,719
1934	Auto Caravans	118	Attendance 10,899

4. Special Parties

1933	Parties	61	Attendance 3,178
1934	Parties	47	Attendance 6,255

5. Museum

1933	Museum	Attendance 76,255
1934	Museum	Attendance 124,144

B. Ranger Naturalist Staff

18 Ranger-Naturalists served during the month as follows:

W. B. MacDougall	Mammoth	Entire month
H. B. Mills	Mammoth	" "
H. E. Stork	Mammoth	" "
C. G. Fredine	Mammoth	" "
W. V. Watson	Norris	" "
W. Smith	Madison	to August 28, inc.
F. Oberhansley	Old Faithful	" " " "
H. R. Stagner	Old Faithful	Entire month
D. deL. Condon	Old Faithful	" "
A. C. McIntosh	Old Faithful	" "
H. M. Kelly	Fishing Bridge	" "
E. T. Bodenberg	Fishing Bridge	" "
R. S. Moore	Fishing Bridge	" "
R. W. Spalding	Canyon	to August 25, incl.
P. Fix	Canyon	" " " "
A. Nash	(relief)	to August 24, incl.
C. B. Hutchins	(relief)	to Aug. 25 and at Canyon for rest of month.

SUMMARY OF NATURALIST ACTIVITIES

Yellowstone National Park

For month ending August 31, 1934

Place	Field Trips No.	Field Trips Attendance	Auto Caravans No.	Auto Caravans No. Cars	Auto Caravans Attendance	Lectures No.	Lectures Attendance	Special Parties No.	Special Parties Attendance	Museum Attendance	Misc. Contacts No.	Totals Contacts Made	Publications Distributed No.	Publications Distributed $ Sales
Canyon	117	20943	21	137	487	62	26394	2	30			47865		
Fishing Bridge	31	640	26	140	465	109	15696	5	84	19479		36384		
Madison	1	33				149	7086	9	627	16532		20178		
Mammoth	185	6322	40	897	3122	64	6867	16	1160	28989		46460		
Mount Washburn							7534					7534		
Norris	117	4922						3	146	17639		22707		
Old Faithful	62	9677	31	1930	6825	75	52858	14	4299	45505		119164		
West Thumb	80	4927				25	3443					8370		
Totals 1933	384	13814	107	1866	6719	1790	78211	61	3178	76255		178177		
Totals 1934	593	47464	118	3104	10899	484	119868	47	6255	124144		306630		

Park Visitors During Period: 83,744

Signed: Max Bauer

Park Naturalist

SUMMARY OF NATURALIST ACTIVITIES

Week
For month ending July 31, 193~~4~~
season

Yellowstone National Park

Place	Field Trips: No.	Field Trips: Attendance	Auto Caravans: No.	Auto Caravans: No. Cars	Auto Caravans: Attendance	Lectures: No.	Lectures: Attendance	Special Parties: No.	Special Parties: Attendance	Museum: Attendance	Misc. Contacts: No.	Totals: Contacts Made	Publications Distributed: No.	Publications Distributed: $ Sales
Canyon														
Fishing Bridge														324.60
Madison														
Mammoth														570.30
Mount Washburn														
Norris														
Old Faithful														764.80
West Thumb														
Totals 193~~3~~													~~2428~~	$ 817.65
Totals 193~~4~~													~~4197~~	1659.50

Park Visitors During Period: _____

Signed: Orma Bauer

II. PERMANENT PROJECTS

A. Administrative

The program of activities continued as set up in June. One all day hike was conducted each week by Junior Park Naturalist, Mr. L. Kearns. Mr. Kearns also took care of the sales publications and accounts relating to the same. Sales were much larger than last season.

Assistant Park Naturalist George C. Crowe supervised the lectures at the six C.C.C. camps and assisted in many campfire programs and guided trips of the regular schedule. He also contacted a large number of special visitors.

Park Naturalist C. Max. Bauer visited many of the scheduled trips, programs and other activities, supervised these activities and assisted in several programs and trips and conducted several special parties. He also edited Nature Notes for the July-August number.

B. Nature Notes

General subject matter, edited and issued on August 12th.

C. Library

135 books in circulation.
54 pamphlets and bulletins received.
10 magazines received.
5 books received, including 3 typed copies of Lieut. Doane's manuscript of his expedition in 1876-1877.

D. Museums

Work:

Accessions: One day's work was done on accession cards.

E. Equipment

Received and set up two museum display cases, one for the antelope at the Mammoth Museum and one island case for Madison Museum.

F. Photographs

3 prints in circulation
10 negatives in circulation.
12 prints received, labeled and filed.

G. Lantern Slides

796 slides in circulation.

H. Publicity Clippings

No work done.

I. Thermal Activity

Mammoth Hot Springs - Observations by Assistant Park Naturalist Crowe.

Angel Terrace has increased in flow since the 15th.

Ruby Spring has also increased in flow.

Blue Pool Area shows the middle of the basin have increased greatly. Large streams of water are flowing to the north around the edge of Jupiter Terrace and to the northeast toward Mound. These waters are depositing travertine quite rapidly coating the old formations with pure white deposits.

Cleopatra Spring has decreased noticeably during the month.

Hymen Spring has decreased but the basins are still well filled with water.

Jupiter Spring is overflowing slightly on its north slope.

Palette Spring has increased in flow and there is greater activity along the cracks reported last month.

Main Spring is more active than at any time during the past three years. Water is overflowing for fourty feet along the old crack.

Minerva Spring is overflowing from the upper outlet after being inactive nearly a year. Algae has colored the upper slopes and some of the lower basins are filled.

Mound Spring shows no change.

Opal Spring has increased in flow.

White Elephant Back shows a little increase.

The great increase in activity since the middle of August in spite of the lack of moisture from light snows of the past winter and the light rainfall of the spring and summer may indicate that surface conditions have little effect on the springs.

Old Faithful District - Observations by Frank Oberhansley.

One of the common questions this season is "Ranger, do you notice any diminishing activity in the geysers this year due to the drought of the past year?", and "Is old Faithful becoming less regular as time goes on?". In answering these questions various viewpoints may lead to both positive and negative answers.

It is my belief that the sum total of geyser action for the season has diminished very little, although there has been more variation in some of the geysers than in the past six years. Old Faithful is still playing every 62 minutes as usual but intervals have been noted of 56 minutes and 93 minutes, the latter being the longest interval ever brought to my attention. The shortest interval observed was 55 minutes between play, noted in 1929 by E. A. Plottman.

Perhaps the greatest variation is noted in the Grand Geyser. The longest interval observed occurred when the Grand ceased playing at 1:30 P.M. Aug. 11th. It did not play again until Aug. 15th at 4:00 A.M., an interval of 27 hours. The shortest interval noted for the current season was 26 hours. The average interval to date this season is near 50 hours.

Comparing this season's activity of the Grand with past years some interesting observations can be made. In 1928 the interval varied from 7 to 17 hours. On one occasion it played 45 consecutive times during one eruption, according to Ranger Naturalist Plottman's notes. Again on Aug. 31st, 1929 the Grand erupted three times in 9 hours at intervals of 2, 2, and 5 hours, respectively, to normal heights.

During the season of 1931 the interval of the Grand varied from 13 to 31 hours, the average number of eruptions during one period of play varying from 9 to 16. The average interval for the season was near 17 hours. In 1932 the average interval was 34 hours. No observations on the Grand were indexed for the 1933 season, but from what I can learn the interval between play varied from 18 to 60 hours with an average of perhaps 38 hours.

We have no records on the Grand geyser prior to 1926. What will happen in the future we cannot tell. Is the protracted drought causing the diminishing action? I do not believe a single season of drought would be manifest during that current season, as studies have proved that deep seated springs do not receive a great deal of their water supply from the meteoric waters of that season, the movement of the ground water being entirely too slow to permit this. Over a long period of time there is no question that precipitation would affect geyser action, since nearly 90% of the water issuing from geysers is meteoric, according to Drs. Day and Allen of the Geophysical laboratory in Washington, D. C.

Other changes have been noted in some of the other geysers and hot pools. In the case of the Riverside, which in times past has played quite faithfully every eight hours, the interval now varies from 6 to 10 hours. Also in past years this geyser overflowed one and a half hours before the main eruption, and a small vent on the same formation was in continual eruption for 30 minutes before play began. This year the overflow has varied from 2 to 5½ hours before play and the small vent mentioned above may begin its play from 5 minutes to an hour before the main show. The principal change in the Riverside, then, is in the indicators.

One of the most remarkable changes is observed in the Rainbow pool. Last year this pool became an active geyser erupting to a height of fifteen to forty feet every few minutes. This year, however, the Rainbow is just an inactive pool, with a temperature cool enough to permit the growth of vari-colored algae, giving a beautiful and fitting color for a pool so named. An interesting nearby pool called the Green Spring, is located on the opposite side of Iron Creek. This pool last year was very inactive, the water being down in the crater about three feet. This year Green Spring is very hot and active, with an overflow amounting to about one half-second foot of water. It appears that there is some connection between these two springs, since when one becomes very active the other is dormant.

Lonestar geyser plays approximately every three hours, as usual, to a height of about 60 to 70 feet. I believe more park visitors have observed Lonestar this year than ever before.

Beehive geyser chose to play once only during the summer. This occurred July 31st at 10:30 P. M., and was observed by Junior-Naturalist Nash and six other persons. It played to a height of approximately 200 feet for a period of five minutes.

Great Fountain geyser has been a most interesting spectacle to large numbers this season, playing on an interval of about 8½ hours, for about 30 minutes. Before the main eruption Great Fountain overflows for about an hour and a half. The height of the main eruption is about 100 feet.

Perhaps the most interesting sight here is the eruption of the Giant, Monarch of all Geysers. On May 6th the Giant played and then rested until Aug. 2nd. I was fortunate enough to be observing and marking up time boards at the nearby Daisy and Riverside geysers just before the Giant began, and was just passing the Giant when it played. It threw an enormous quantity of water high into the air to a height of perhaps 250 feet. My first duty was to notify Old Faithful camp, and in less than an hour more than 1500 visitors were gathered at the point of interest. The Giant began play at 8:15 A. M. and ceased at 10:24 A. M., the play lasting for two hours and five minutes. All nearby pools were drained, including those on the opposite side of the Firehole River 200 yards away. On Aug. 18th, at 10:30 P. M. the Giant played again in darkness. Approximately 200 persons viewed this eruption.

Giantess geyser has not played to date this season but of late has been boiling vigorously and looks promising. No one can foretell play of either the Giant or Giantess, and perhaps this is just as well since the element of uncertainty adds to the interest of all and keeps us primed for the unexpected.

Activity in the Lower, Middle and Biscuit geyser basins remains normal. The Jewel and Sapphire geysers are still erupting as formerly on an interval of six and eight minutes, respectively, to lead all other features in interest in Biscuit Basin.

No changes have been observed in the Shoshone geyser basin to date.

Summing up, I would say very little change has occurred, on the whole, in geyser activity during the past season.

F. Personnel

The permanent personnel, consisting of Park Naturalist Bauer, Assistant Park Naturalist Crowe and Junior Park Naturalist Kearns, were on duty all month. Miss Clare Nash, temporary clerk-stenographer, was on duty all month.

The caretakers of the various museums, Victor J. Hunt, Old Faithful, Julian Hart, Mammoth, and James H. Hamilton, Fishing Bridge, were on duty all month.

Respectfully submitted,

C. Max. Bauer,
Park Naturalist

CC Director
Dr. H. C. Bumpus
Ansel F. Hall and Dr. C.P.Russell
Museum

CMB:CR

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

E OF THE SUPERINTENDENT

October 2, 1934.

REPORT OF THE NATURALIST DEPARTMENT
FOR
SEPTEMBER, 1934

I. CURRENT OPERATIONS

A. Public Contact

Visitors: Special visitors include the following:

Dr. and Mrs. Frank T. Gustler.
Dr. H. C. Bumpus and son and grandsons.
Col. [illegible] and 16 Reserve Officers of Utah and Idaho.
Dr. G. B. Rigg, Botanist, University of Washington.
Dr. [illegible], [illegible] University.
Bishop Baker, M. E. Church, San Francisco.
Mr. & Mrs. James L. Clark, American Museum of Natural History.
Dr. & Mrs. Glenn L. Jepson, Princeton University.
Mr. & Mrs. C. A. Yoakey, Assistant Director, N. P. S.
Dr. & Mrs. Shepard, Columbus, Ohio.
Dr. & Mrs. Wendall S. Chapman.
Mr. & Mrs. Kessler, Washington, D. C.
Mr. & Mrs. N. C. Kloughs, Chicago, Ill.
Miss P. M. Skinner, Cambridge, England, Commonwealth Fellow, Wisconsin University.

Lectures: The usual campfire lectures were carried on by the Ranger-Naturalists to the close of the season. [illegible] were given in the museums on cold and rainy nights. The park naturalist began a series of lectures on general geology for the employees at Mammoth on September 28th. Twelve lectures will be given in [illegible] weeks.

Comparative statistics of contacts for [illegible] September, 1934 are given below:

1. Guided Trips

1933 Guided Trips	128	Attendance	2,110
1934 Guided Trips	165	Attendance	4,928

2. Lectures

1933 Lectures	620	Attendance	8,650
1934 Lectures	127	Attendance	11,564

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE PARK, WYO.

SUMMARY OF NATURALIST ACTIVITIES

Yellowstone National Park

For week / month / season ending September 23, 1934

Place	Field Trips No.	Field Trips Attendance	Auto Caravans No.	Auto Caravans No. Cars	Auto Caravans Attendance	Lectures No.	Lectures Attendance	Special Parties No.	Special Parties Attendance	Museum Attendance	Misc. Contacts No.	Totals Contacts Made	Publications Distributed No.	Publications Distributed $ Sales
Canyon [1]	15	1922				8	2100					4000		
Fishing Bridge [2]	11	71				70	[illegible]	2	44	4165		5219	207	$ 72.95
Madison [3]														
Mammoth [3]	60	1552	13	139	424	22	[illegible]	1	40	[illegible]		[illegible]	301	122.30
Mount Washburn [4]							1715					1715		
Norris [5]	14	211								[illegible]		2074		
Old Faithful [6]	21	1021	10	164	650	27	[illegible]			[illegible]		17093	494	222.30
West Thumb [7]	24	651										651		
Totals 1933 [3]	128	2116	40	240	799	620	[illegible]	7	273	14574		[illegible]	362	157.80
Totals 1934 [4]	165	[illegible]	20	315	1044	127	11564	3	94	[illegible]		[illegible]	1092	417.75

1. Closed Sept. 4, 1934
2. Closed Sept. 18, 1934
3. Closed Sept. 25, 1934
4. Closed Sept. 20, 1934
5. Closed Sept. 6, 1934

Park Visitors During Period: [illegible]

Signed: Omar Bauer

Park Naturalist

SUMMARY OF NATURALIST ACTIVITIES

Yellowstone National Park

For week / month / season ending [illegible], 193[illegible]

Place	Field Trips No.	Field Trips Attendance	Auto Caravans No.	Auto Caravans No. Cars	Auto Caravans Attendance	Lectures No.	Lectures Attendance	Special Parties No.	Special Parties Attendance	Museum Attendance	Misc. Contacts No.	Totals Contacts Made	Publications Distributed No.	Publications Distributed $ Sales
Canyon														
Fishing Bridge													669	$ 2[illegible].60
Madison														
Mammoth													1742	[illegible]7.60
Mount Washburn														
Norris														
Old Faithful													1873	971.50
West Thumb														
Totals 193[illegible]													2743	[illegible].75
Totals 193[illegible]													6[illegible]9	1796.50

Park Visitors During Period: _____

Signed: Omax Bauer
Park Naturalist

3. Auto Caravans

1933 Auto Caravans	40	Attendance	769
1934 Auto Caravans	25	Attendance	1,044

4. Special Parties

1933 Parties	7	Attendance	275
1934 Parties	3	Attendance	84

5. Museums

1933 Museum	Attendance	14,574
1934 Museum	Attendance	20,513

B. Ranger-Naturalist Staff

Ranger-Naturalists served during the month as follows:

W. B. McDougall	Mammoth	to Sept. 24, incl.
H. B. Mills	Mammoth	to Sept. 10, incl.
H. E. Stork	Mammoth	to Sept. 5, incl.
C. G. Predine	Mammoth	to Sept. 13, incl.
W. V. Watson	Norris	until Sept. 6 and
	[illegible]	to Sept. 15, incl.
H. P. Stamper	Old Faithful	to Sept. 18, incl.
D. deL. Comion	Old Faithful	to Sept. 15, incl.
A. C. McIntosh	Old Faithful	to Sept. 3, incl.
M. I. Bodenberg	Fishing Bridge	to Sept. 7, incl.
R. S. Moore	Fishing Bridge	to Sept. 1, incl.
C. B. Hutchins	Mammoth	to Sept. 11, incl.
T. A. Peery	Canyon	to Sept. 3, and
	Fishing Bridge	to Sept. 17, incl.

II. [illegible]

A. Administrative

Park Naturalist Bauer supervised the activities of the Naturalist Department, relieved men on desk duty several times, took a number of trips to study wildlife and planned a trip to the Northeast arm of Yellowstone Lake. This trip was taken in company with Assistant Park Naturalist Crowe, and Junior Park Naturalist Kearns on September 15th.

Assistant Park Naturalist Crowe was mainly occupied in the supervision of guided trips and campfire programs during the first [illegible] of the month and in closing the museums in the last part of the month.

Junior Park Naturalist Kearns assisted on regular Naturalist work and continued to manage sales publications. During the last part of the month he assisted in closing museums and in numerous wildlife observations and photographing. It is hoped that closer cooperation may be had between the wildlife work of Ranger Childs, R. C. W. Naturalist Assistant Mills and Mr. Kearns to the end that the Naturalist Department may be fully informed on projects and developments and also that the museum will receive their help in building up its skin and skull collection.

B. Nature Notes

The September-October Nature Notes were edited and stencils cut.

C. Library

97 books in circulation
21 pamphlets and bulletins received
10 magazines received
3 books received.

D. Museums

Work: Madison Junction Museum was closed on August 28th.

Norris Museum was closed on September 6th.

Fishing Bridge and Old Faithful Museums were closed on September 18th.

Headquarters Museum was closed on September 24th.

Accessions: Five days' work was done on accession cards.

E. Equipment

F. Photographs

3 prints in circulation
3 negatives in circulation

G. Lantern Slides

1000 slides in circulation

H. Publicity Clippings

No work done.

I. Thermal Activity

Mammoth Hot Springs - Observations by Assistant Park Naturalist Crowe.

Angel Spring has shown some increase during the month.

Baby Spring is increasing in flow and appears to have affected Cupids Cave close by.

Blue Springs. The heavy flow has continued all month.

Cleopatra Spring has decreased during the month.

Hymen Spring has decreased.

Jupiter Spring has a very slight overflow.

Main Terrace has more basins filled and more color than at any time during the past three years.

Minerva is steadily increasing. The overflow to the north is quite noticeable

Mound Spring also shows an increase in flow.

Opal Spring has increased during the month.

Orange Spring shows no change.

Palette Spring is flowing as strong as it has all summer.

White Elephant Back Terrace. Steam from several points.

The small new spring between Devils Kitchen and Elephants Back is flowing again after inactivity of four months.

The algae coloring is chiefly brown shades and green with the cooler weather.

K. Personnel

The permanent personnel consisted of Park Naturalist C. Max. Bauer, Assistant Park Naturalist George C. Crowe, and Junior Park Naturalist William T. Kearns, and were on duty all month. Miss Clara Nash, temporary clerk-stenographer, was on duty all month and her services in the department terminated on the last day of the month.

Victor J. Lunt, Julian Yost and James R. Hamilton, caretakers, terminated services on September 13th, September 8th and September 14th, respectively.

Respectfully submitted,

C. Max. Bauer,
Park Naturalist

CC Director
Dr. H. C. Bumpus
Ansel F. Hall and Dr. C. P. Russell
Museum

CMB:CR

[illegible] Spring has decreased.

Jupiter Spring has a very slight overflow.

Rain Terrace has more basins filled and more color than at any time during the past three years.

[illegible] north is quite noticeable

[illegible] also shows an increase in flow.

Opal Spring has increased during the month.

[illegible] Spring shows no change.

Palette Spring is flowing strong as it has all summer.

[illegible]

The small new spring between Devils Kitchen and Placments Back is flowing again after inactivity of four months.

The algae coloring is chiefly brown shades and green with the [illegible] weather.

[illegible]

The permanent personnel consisted of [illegible] C. [illegible], Assistant Park Naturalist George C. [illegible], and Junior Park Naturalist William E. [illegible], and were on duty all month. [illegible] Clark [illegible], temporary clerk-stenographer, was on duty all month and her services in the department terminated on the last day of the month.

[illegible] terminated services on September 15th, September 6th and September [illegible], respectively.

Respectfully submitted,

[illegible]

C. [illegible],
[illegible]

[illegible]

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

ICE OF THE SUPERINTENDENT

November 2, 1934

REPORT OF THE NATURALIST DEPARTMENT

for

OCTOBER 1934

I. CURRENT OPERATIONS

A. Public Contact

Visitors:

C. J. Warfleet and William Weinhardt of Warner Bros. Pictures were in the Park for several days taking pictures, movies and stills.
Mr. and Mrs. H. B. Darnell, formerely manager of the Trans-Siberian Railroad.
Mr. and Mrs. W. G. Asher, lecturer.
Dorothy Doran, Birmingham, Ala.
Drs. O. J. and Adolph Murie, Biologists.

Lectures:

Assistant Park Naturalist Crowe spoke to 100 of the Yellowstone Club in Livingston, October 29th, giving them an illustrated lecture on the Naturalist work in the Park. He also spoke twice to the C. C. C. Camp and conducted a party of 18 C.C.C. boys to the Upper Geyser Basin.
Park Naturalist Bauer continued lectures on general geology, twice each week. They were attended by an average of 35 employees each night and were well received. It is planned to continue this series for several months. The twelve geology lectures will be followed by six lectures on Wild Life and then by eight lectures on Western History.

B. Ranger-Naturalist Staff:

Most of our Ranger-Naturalists are planning winter lectures in their own localities. Mr. Charles Bowman Hutchins is devoting the entire winter to lecturing in various parts of the country. Others who have already started on this work are: Stagner, Lystrup, Condon, Oberhansley, and Bodenburg.

II. PERMANENT PROJECTS

A. Administrative:

The Park Naturalist took five field trips into the back country to observe wildlife and geologic sites of interest. Some specimens and fossils were collected. Plans for winter work were made and several projects started.

Assistant Park Naturalist Grove spent most of the month on publicity clippings and directing the work of two C.C.C. boys in this work and other jobs. He also made several trips of inspection in closing museums.

Junior Park Naturalist Kearns spent considerable time on wildlife observations and taking photographs (both movies and stills) of beaver, sheep, and antelope. He illustrated Nature Notes, and handled a great deal of office work including typing, filing, and Sales Publications reports. He also accompanied the Warner Bros. photographers and succeded in securing for them pictures of beaver, elk, deer, buffalo, ducks, and geese.

B. Nature Notes:

The September-October edition on miscellaneous wildlife was published and mailed to about 800 addresses. Plans for improving the mimeographing and general appearance of Nature Notes have been made.

C. Library:

The present count shows 1442 bound volumes on the shelves, and 1826 pamphlets. The Board meeting of the Yellowstone Library and Museum Association was held on October 19th. The reports of this meeting will be sent out separately, but it is gratifying to note the progress of the Association and the work that has been accomplished this last year.

19 books in circulation
55 pamphlets and bulletins received
21 magazines received
3 books received

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

Beaver hurrying to water with a freshly cut aspen limb.

Beaver trimming branches from fallen aspens.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

The activities of the Beaver in the Crescent Hill pond have provided much interest to both permanents and visitors alike, for seldom can beaver be observed in bright sunlight in the pursuit of their usual routine of felling trees, storing food, eating, caring for their toilet, or playing in the water. As many as seven beaver have been observed out of the water at one time on the hill above this pond.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE PARK, WYO.

D. Museums:

Work

All museums had been closed in September, and some work was done in each to properly care for exhibits.

Accessions:

No work on accessions.

E. Equipment:

A Filmo 70-A movie camera was received this month by purchase through the Washington office. A new table was added for the laboratory, and a magazine rack and a hanger for large maps were added in the library.

F. Photographs:

A request has been sent to department heads by the Acting Superintendent, that all negatives and one print of each be filed in the photographic file in the museum.

97 negatives in circulation
4 prints sent out

G. Lantern Slides:

158 slides in circulation.
There are now 1056 slides in the files of the Yellowstone Museums.

H. Publicity Clippings:

This year has been an especially good year on publicity. During October all clippings were sorted and pasted in scrap books according to subjects. No duplicates were pasted, but the newspapers in which duplicates appeared were listed.

5025 clippings were classified.
1045 separate items were pasted. Items on Travel were the most common. This work is not current.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

I. Thermal Activity:

Observations by assistant Park Naturalist Crowe.

This month has been one of increasing activity over the Mammoth Terraces. It is quite possible that Jupiter Terrace will again show the beautiful coloring of a few years ago.

Angel Terrace is about the same as the first slope, and the spring that was active last spring, fifty feet to the south, is flowing again.

Baby Spring has doubled in flow and covers a much larger area.

Blue Springs have increased to such an extent that water is overflowing to the north and joining the flow of Mound Spring. It is also overflowing Jupiter Springs and increasing that flow. Two small streams of water are flowing down the east slope of the formation between Jupiter Springs and Canary Springs that is now inactive. The greatest flow of water still continues at the extreme south edge of the formation near the trail.

Cleocatra Spring. The water is flowing again from the outlet forty feet south of the main outlet. This outlet has been inactive for over a year.

Hymen Spring has decreased about a quarter of its flow during the month.

Main Spring has almost ceased flowing and the new deposits of travertine are white.

Minerva Spring is flowing as strong as last month with darker shades of algae in evidence.

Orange Spring has increased a little, as has also the small outlet twenty feet to the northeast.

White Elephants' Back activity has practically ceased.

Blue Springs are more beautiful in color and broader in area of formation covered than for a number of years.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OF THE SUPERINTENDENT

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

K. Personnel:

Only the three members of the permanent staff, C. Max Bauer, George C. Crowe, and William E. Kearns were on duty this month.

From October 19th to the end of the month, we have had an average of two C. C. C. workers assisting in Museum work.

Respectfully submitted,

C. Max Bauer

C. Max Bauer
Park Naturalist

CC Director
Dr. H. C. Bumpus
Ansel F. Hall and Dr. C. P. Russell
Museum

CMB:K

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

CE OF THE SUPERINTENDENT

December 3, 1934

REPORT OF THE NATURALIST DEPARTMENT

for

NOVEMBER 1934

I. CURRENT OPERATIONS:

A. Public Contact

Visitors:

Mr. and Mrs. Kendell Chapman are still in the vicinity. They reside in Gardiner and are photographing in the Park.

Dr. and Mrs. Young, Montana State College of Bozeman, Montana.

Bishop Seaman of Amarillo, Texas, and Reverend Smith of Livingston.

Superintendent Robert Yellowtail, Crows Indian Reservation, Montana.

Lectures:

The series given for the Mammoth Community was continued on each Tuesday evening, with an average attendance of 42 persons.

The lectures at the C.C.C. Camp were carried on two nights each week. Messrs. Joffe, Crowe, Doyle, Fearns, and Baggley being the speakers during the month.

B. Ranger-Naturalist Staff

No Ranger-Naturalist work at the Park, but Dr. Harlow B. Mills, Naturalist Assistant under L. C. W. has been carrying on research on wildlife with Ranger Frank Childs and independently.

It should also be noted that Ranger-Naturalist Arthur Nash and wife are now in Australia on their tour around the world. He reports interesting plant life and interesting experiences.

II. Permanent Projects:

A. Administration

Projects have been assigned to each of the permanent staff to be carried on during the winter season. Park Naturalist Bauer is working on Place Names of Yellowstone

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE PARK, WYO.

Park. This month 4½ days were spent on this project. Supervision of work of the department, conferences, and routine, including answering correspondence, research on many small items, and general reading, occupied the remainder of his time.

Assistant Park Naturalist Crowe supervised and worked with 2 C.C.C. boys on mounting large maps (3 mounted for Ranger department, and 7 for Naturalist department); 210 specimens permanently mounted in herbarium; several small painting jobs done in workroom and laboratory; 136 rock specimens were shipped to 15 schools and colleges; pasting over 5000 clippings; and other miscellaneous work including observations of Hot Spring activity.

Junior Park Naturalist Kearns supervised the Library copy work of one C.C.C. boy; worked on Library accessions and accession records; printed stationery for the Yellowstone Library and Museum Association; took three field trips; and handled considerable typing, filing, accessioning, revision of files, and matters pertaining to book sales and the Yellowstone Library and Museum Association.

B. Nature Notes:

No work done on Nature Notes during November.

C. Library:

35 books in circulation.
1 book received.
25 pamphlets received.
29 magazines received.
One C.C.C. boy has been engaged in copying accession list into permanent record book.

D. Museums:

No work on museums or museum accessions this month.

E. Equipment:

No equipment added.

F. Photographs:

143 negatives in use; 14 prints sent out; 1 movie reel (35 mm.) on buffalo sent to Philadelphia.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

G. Lantern Slides

351 slides in circulation.

H. Publicity Clippings

As stated last month all publicity clippings were sorted, classified and pasted.

5023 clippings were classified. A few of the subjects most commonly publisized are listed below.

Subject	Stories	Subject	Stories
Gen'l Travel Information	397	Special Visitors	243
C.C.C. Activities	163	Roads	159
Pictures N.P.S.	126	Conservation	108
Editorials	96	Stamps N.P.S.	94
Naturalist Dept. Activities	89	Bears	70
Buffalo (bison)	68	Rail Road Travel	64
Ranger Dept.	50	Weather	48
Conventions	46	Accidents & Deaths	37
Special Articles	13		

I. Thermal Activity

Observations by Assistant Park Naturalist Crowe.

Angel Terrace. Five new outlets are flowing heavily fifty feet to the south where there was activity last spring. The water has almost stopped flowing from the old spring.

Baby Spring is still flowing strong.

Blue Springs continues to flow heavily as during the early flow. The larger portion of the water is now flowing to the north toward Mound Terrace.

Cleopatra continues to increase in flow.

Cupids' Cave is greatly reduced due to the activity of Baby Spring near by.

Hymen Spring has decreased slightly.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

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Buffalo (bison)	68	Rail Road Travel	64
Ranger Dept.	50	Weather	48
Conventions	46	Accidents & Deaths	37
Special Articles	13		

I. Thermal Activity

Observations by Assistant [illegible] Naturalist Crowe.

Angel Terrace. Five new outlets are flowing heavily fifty feet to the south where there was activity last spring. The water has almost stopped flowing from the old spring.

Baby Spring is still flowing strong.

Blue Springs continues to flow heavily as during the early flow. The larger portion of the water is now flowing to the north toward Mound Terrace.

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Cupids' Cave is greatly reduced due to the activity of Baby Spring near by.

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DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

An old patriarch of Crescent Hill posing for his picture.

The larger of the two Crescent Hill Beaver houses. The car in the background shows the proximity of the highway to the Beaver colony.(Note beaver on side of house)

A part of the Mt. Everts' flock of sheep. The lamb in the center foreground was only about half the age of the other lambs in the flock.

A ram and a ewe on the northern slope of Mt. Everts.

Jupiter Spring is still inactive.

Main Terrace activity has practically ceased.

Minerva Spring shows no change from last month.

Naiad on the north slope of Mound shows a little activity, the first in two years.

Palette Spring shows no change from last month.

Ranger Curtis Skinner reports that the Giant Geyser played on November 27th beginning a 3 P.M. and ceasing sometime during the night. This was a sub-normal erruption both as to volume and duration of activity.

Ranger Skinner also reported that Three Sisters Springs show an increase in flow of water, and that the Grotto Geyser shows a similar increase in volume.

X. Personnel

The permanent personnel was as follows:
Park Naturalist C. Max. Bauer on duty all month.
Assistant Park Naturalist George C. Crowe, all month except 1½ days sick leave.
Junior Park Naturalist William E. Kearns on duty all month.

During November there have been three C.C.C. boys assigned to the Museum work. They are: Clyde Stewart, Lucas Howard, and Herbert Aldridge.

Respectfully submitted,

C. Max Bauer
Park Naturalist

CC Director
Dr. H. C. Bumpus
Ansel F. Hall and Dr. C.P.Russell
Museum

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

January 3, 1935.

REPORT OF [illegible]
for
[illegible], 1934

I. CURRENT OPERATIONS:

A. Public Contact

Visitors

Dr. and Mrs. Young, Botanist, Montana State College
Mr. Kempke, Engineer from N.P.S. in San Francisco.

Lectures

Forty-five CCC conducted to Buffalo Ranch by Mr. Crowe on December 9.

The lectures for the CCC Camp #1549 were given by Park Service men, two each week. The men participating were Messrs. LeNoue, Emmert, Childs, Hundley, and Mills.

In the Mammoth Community lectures a series on History was begun and two evenings were devoted to Wildlife Movies by Wendell Chapman.

B. Ranger Naturalist Staff

Several Ranger Naturalists continued lectures in their own communities.

II. PERMANENT PROJECTS

A. Administration

Park Naturalist Bauer has had a number of conferences with Acting Superintendent Emmert. He has also carried on the usual work connected with correspondence, some of which required investigation in order to supply correct information. Several days were spent in editing Haynes Guide Book and several days in editing Nature Notes. Much of the remaining time was spent on Yellowstone Place Names.

Assistant Park Naturalist Crowe assisted in the lecture series, conducted the Christmas Program for the community and supervised the work of 3 CCC boys on mounting herbarium

specimens and photograph files, and in putting out Nature Notes.

Junior Park Naturalist Kearns spent a large part of the month on general office work, typing and filing. He illustrated Nature Notes and assisted in its preparation and mailing. He also made observations on the Hot Springs. Several short ski trips were made in preparation for a longer trip into the Park which will be taken in January.

B. Nature Notes

The November-December issue is largely on the American buffalo or Bison. The illustrations and mimeographing have been improved and the cover is in two colors. About 820 copies were circulated.

C. Library

33 books in circulation
2 books received
34 pamphlets received
14 magazines received

D. Museums

No work on exhibit material or accessions, but 2 CCC boys have been working most of the month on the Herbarium.

E. Equipment

Tripod for movie camera was obtained

F. Photographs

35 negatives in use
20 prints sent out

Most of the month some one has been working on the photograph files, pasting prints and numbering and filing negatives.

G. Lantern Slides

131 slides in use

H. Publicity Clippings

This work brought current last month. No work done

this month. (See report for November)

I. Thermal Activity

Observations by Junior Park Naturalist Kearns.

Angel Terrace

Renewed activity on the old spring site, with a strong continuation at the new outlets some fifty feet to the south of the old spring. The deposits at the new flow are strikingly beautiful with orange, yellow, and green tints predominating.

Blue Springs

Flow has decreased since last month, with but about one half the flow of water going over the southeast edge of the terrace, and the major part of the flow breaking farther to the east and to the north.

Baby Spring

A decided decrease in flow, due in part perhaps to the increase in flow at Cupids' Cave nearby.

Cleopatra

An increase in flow is noted on the new spring opening from which the water is flowing to the east, while the flow to the north is about the same as last month.

Cupids' Cave

A marked increase in flow, with brilliant algae coloring.

Hymen Spring

About the same as last month.

Jupiter Spring

Shows signs of activity again, but very slight.

Minerva Spring

Flow has ceased entirely from the highest point, and the travertine has bleached out white. The lower springs are continuing a strong flow.

Palette Spring

About the same as last month, with the very southern edge decreasing slightly.

Cleopatra Spring

Greatly increased in flow, with lavish coloring, on south side.

Naiad

Continued with slight activity.

Orange Mound

Slight activity to the southeast.

Devil's Kitchen

Entrance sealed over with drifted snow, as are also several of the caves to the south.

K. Personnel

The permanent personnel of the Naturalist Department was as follows:

Park Naturalist C. Max Bauer on duty except for two days' leave.
Assistant Park Naturalist George C. Crowe on duty except for ½ day sick leave.
Junior Park Naturalist William D. Kearns on duty except for 2½ days' sick leave.

During December we had an average of 2½ CCC boys on museum work, viz. Clyde Stewart, Herbert Aldridge and Lucas Howard.

Respectfully submitted,

C. Max Bauer
Park Naturalist

CC Director
Dr. Thompson
Hall and Russell
Museum ✓

CMB:VR

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

'ICE OF THE SUPERINTENDENT

February 4, 1938

[illegible]
for
[illegible]

I. [illegible]:

A. Public Contact

Visitors:

Dr. James Fifield, Kansas City, Missouri.
Dr. Adolf Murie, Wildlife Technician, E.C.W.
Mr. Merle Meage, Denver, Colorado
Dr. Hadleigh Marsh, Montana State College, Bozeman, Montana.
Dr. L. H. Walch, Montana State College, Bozeman, Montana.

Lectures:

The Mammoth lectures were continued as follows:

January 2: "The Fossil Story of the Animals"
Dr. C. Max. Bauer. 26 present

January 8: "The Classification of Animals"
Dr. Harlow B. Mills. 43 present

January 15: "The Elk Problem" P.B. La Noue
"The Wildlife Division"
Dr. Adolf Murie. 42 present

January 22: "Wildlife of the Yellowstone Before the White Man Came," Illustrated.
Dr. C. Max. Bauer. 29 present

January 29: "Birds of the Yellowstone"
Dr. Harlow B. Mills 31 present

The lectures for the C.C.C. Camp #1548, Y.N.P. #1, have been continued during the month by officials, rangers, and naturalists of the Park personnel. They were given twice a week until the middle of January and since then, only once each week.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

Park Naturalist Lawer was in Billings, Montana, January 14 and 15 to speak to the Rotary Club and the schools. He gave illustrated lectures to three High School groups, three Junior High groups, one group of Boy Scouts, a miscellaneous group at the Baptist Church, and the Rotary Club, speaking to a total of 1180 people on "Wildlife in Yellowstone Park."

Assistant Park Naturalist Crowe went to Powell and Cody, Wyoming on January 30-31 to speak to the schools and the civic clubs. His report has not been made to-date, but will be included next month.

B. Ranger Naturalists

It appears now we will have only two vacancies to fill this coming season. For these two positions we have already received 18 qualified applicants.

II. [illegible]

A. Administration

The Park Naturalist was occupied on various projects including the supervision of the Naturalist work and the work of 5 C.C.C. men during half of the month. Several conferences on the Elk situation and Wildlife matters were attended. Correspondence was rather heavy and required much time. Check on Place Names remained at a standstill although several half days were given to it.

Assistant Park Naturalist Crowe was assigned to work of keeping a photographic record of the Elk situation with respect to trapping, shipping or slaughter, if any. He also supervised the photograph filing and the work on the herbarium, besides taking care of some correspondence and research work.

Junior Park Naturalist Kearns spent fifteen days on a ski trip around the south loop of the Park comprising about 175 miles accompanied by Mr. Wendell Chapman. It was a stormy period and plenty of snow, and skiing was bad. However, some excellent pictures were obtained in the Norris and Upper Geyser Basins, and on the Lake, and at Canyon. During the latter part of the month Mr. Kearns supervised the organizing of materials in the storerooms and did considerable office work such as typing, filing, and accessioning. He also directed the work of Mr. Baker on the museum cataloging. Observations on the Geyser Basins and the Mammoth Hot Springs were made by him this month.

DEPARTMENT OF THE INTERIOR

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B. Nature Notes

The January-February issue has been planned on the subject of "Research in Yellowstone," but the edition is not yet prepared.

C. Library

Books in circulation.....24
Books received.....11
Pamphlets received.....29
Magazines " 30

Three days on library accessioning.

D. Museums

One C.C.C. enrollee has been working on Museum Accessions and cataloging under the direction of Naturalist Kearns. He has spent 15 days on this work.

A collection of 25 insects collected by Dr. Harlow B. Mills were sent to Iowa for complete identification and verification by him, were received this month and added to the museum.

E. Equipment

No equipment was purchased or received.

F. Photographs

Negatives in use.....28
Prints sent out.....37

One C.C.C. enrollee has spent the entire month on filing and pasting negatives and prints under the direction of Naturalist Crowe. Also E.C.E. negatives have been filed.

G. Lantern Slides

Slides in use.....341

H. Publicity Clippings

All current in December.

Grotesque tree shapes bowed beneath icy mantles near Emerald Spring in the Norris Geyser Basin.

Preparing the photographic items, and filing negatives.

Dr. Harlow B. Mills (left) [illegible] Naturalist [illegible]istant, and two C.C.C. helpers in the laboratory.

Mounting specimens for the herbarium.

E OF THE SUPERINTENDENT

I. Thermal Activity

Observations by Junior Park Naturalist Konrad.

Angel Terrace

All but one of the new outlets, some fifty feet to the south of the old outlet, have ceased flowing, and the flow from the one remaining is but slight. There is, however, a decided increase in the flow of the outlet to the north of the main spring, and the total flow for this terrace is about the same as last month.

Blue Spring

The flow of water from these springs continues to diminish in volume with less and less water flowing from old outlets. This may be accounted for, at least in part, by the tremendous increase in the flow of the new spring to the west.

Baby Spring

A continued decrease in flow is evidenced.

Cleopatra

A decided decrease in the flow to the north, but an increase in the flow from the new opening further to the south, with most of the water going over the southeast shoulder of this terrace.

Cupid's (Cave) Spring

A continued increase in flow with beautiful and delicate coloration.

Hymen Spring

Continues much the same as during the month of December.

Jupiter Spring

Activity about the same as during the past month.

Minerva Spring

The lower springs have decreased in flow and many pools formerely filled and beautifully colored are now drying up and bleaching out white.

Orange Mound

The only flow is to the West, and the main opening is now a small one on the side with the water spurting out over the side of the Terrace much as if played from a nozzle. There is a marked increase in the small spring some seventy feet to the south.

Paloette Spring

The activity is much the same as for December with the wind-blown snow drifts encroaching from the south.

?????(A New Spring)

This new spring is located on the bench of the terrace below and to the northwest of Cupid's Spring and is one of the most spectacular of the springs. It is responsible, perhaps, for the decrease in flow from the Springs. This spring is in a slight declevity and is fed from bubblers on the rim. Last month the pool was about six feet in diameter, while now it will measure about twelve by eighteen feet. The pool itself is beautiful blue with the algae coloring the inflowing streams on the side many shades of orange, reds, and yellows.

Mound Spring

The outlet on the southern edge of this terrace is flowing a strong stream and evidences renewed activity.

OBSERVATIONS OF GEYSER ACTIVITY
January 8-15, 1935
Junior Park Naturalist Mearns

Roaring Mountain

Considerable more activity is evidenced, both as shown by vapor and also by the amount of run-off. Rumbling of the mountain is more audible than in summer.

Norris Geyser Basin

Congress Pool is lower than it was in late September, and is a dirty slate-gray color.

Whirligig, Fan, Constant, and Black Growler evidence considerable activity, and Hurricane Vent was more than living up to its name.

The steam from Bathtub and Emerald Springs freezing over the snow covered trees (ice too, perhaps) has resulted in many weird and grotesquely beautiful formations. In many cases the trees have been completely covered and so weighted down by ice and snow that they now bear no resemblance to their former shapes, but crouch in the snow as six-ton lumps. Although many trees in the basin were so treated by the vapor from the springs, none equaled in beauty and shape the ones immediately near the above mentioned two.

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Considerable activity was seen in the lower basin to the south of the Minute Man Geyser with a great display of vapor and an occasional eruption. Many hitherto unnoticed springs were easily seen under such conditions.

Vapor clouds hung heavily over the entire basin, and when an eruption took place, one had to be on the look-out and locate the geyser in eruption by the sound as much as by the eye, for the steam and water were lost in the stark and low-hanging cloud banks.

Beryl Spring

This very hot spring was quite active, and offered a very decided contrast in temperature to the ice-bridged rim, and deep drifts at its very edges.

Terrace Springs

The activity here seemed about the same as in late September, but the grass and moss was green along the run-off, and seemed just a border between the water and the snow drifts.

Upper Geyser Basin

The Grotto, Grand, Castle, and Old Faithful geysers were seen in action but the mantle of clouds and a heavy snow storm settled so low over the basin that the eruptions did not appear to advantage. The only sure way of knowing that even Old Faithful was erupting was by the roar, for the vapor and water were quickly dissipated in the clouds and snow.

West Thumb

The Paint Pots were more effective when seen playing against the snow than when seen in the summer, but the springs do not appear to advantage, because of the low-hanging vapor clouds.

There were some unusually beautiful snow trees near several of the hotter springs.

The spring in the rocks at the west edge of the dock evidenced increased activity and roared away at a great rate.

Mud Volcano

The Mud Volcano had receded since September, but appeared otherwise as active as ever.

Dragon's Mouth

The roaring and slapping of the water was more pronounced undoubtedly because of the atmospheric conditions, but the run-off seemed to be about the same as usual in volume.

Kelley's Spring

Fringed by ice and snow, this spring which during high water is right in the river, appeared a dark green in color as seen from the road above, and appeared more active than in the Fall.

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Grand Canyon Springs

The springs and bubblers along the water's edge in the Canyon below the lower Falls were much more in evidence than usual, because of the small mean water columns.

It is just as well for the tourists that they cannot see the Park in the winter, for the geysers and hot springs would be a disappointment as they do not appear to advantage at this season.

K. Personnel

The permanent personnel of the Naturalist Department was as follows:

Park Naturalist C. Max. Bauer on duty all month.
Assistant Park Naturalist George C. Crowe on duty all month.
Jr. Park Naturalist William E. Kearns on duty all month.

For January we had 5 C.C.C. enrollees assisting in museum and naturalist work. There were with us all month, and two from January 15th on to the end. They are: Clyde Stewart, Herbert Aldridge, Lucas Howard, Ezra Nichols, and Edward Black.

Respectfully submitted,

C. Max. Bauer
Park Naturalist

CC Director
Dr. Bunpus
Hall and Russell
Museum

CMB:K

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NATIONAL PARK SERVICE

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ICE OF THE SUPERINTENDENT

March 1, 1935

REPORT OF THE NATURALIST DEPARTMENT

for

FEBRUARY 1935

I. CURRENT OPERATIONS:

A. Public Contact

Visitors:

Dr. Phillip, Hamilton, Montana
Mr. Wilburn, Pearisburg, Virginia
Major Hammond, Ft. Missoula, Montana
Major Bibighaus, Pennsylvania

Lectures:

The schedule of lectures for Mammoth was continued as follows:

February 5: "Wildlife Problems in Yellowstone"
Dr. C. Max. Bauer 30 present
February 12: "Through the Yellowstone Wilderness with the Washburn, Langford, Doane Party."
A. E. Kearns 25 present
February 19: "The Hayden Surveys and the First Superintendent of Yellowstone Park."
Dr. C. Max. Bauer 41 present
February 26: "Army Days in Yellowstone"
George C. Crowe 54 present

Lectures at the C.C.C. Camp No. 1849 near Mammoth were continued during February as follows:

February 6: "Winter Experiences"
A. E. Kearns 75 present
February 13: "Game and Fish of the Park"
George Miller 95 present
February 27: "The Administrative and Fiscal Side of the C.C.C."
Frank Peters [illegible] present

Assistant Park Naturalist George C. Crowe was on a lecture tour in Wyoming from January 25 to February 4, speaking at Powell, Cody, and Basin, Wyoming, to clubs, schools and churches. He made important contacts for the National Park Service as evidenced by the fine letters of commendation received since his return. He stopped in Billings, Montana on his way home to visit the offices of the Wild Life Magazine. On February 22, Mr. Crowe lectured on "The Story of Founders Day" at the school auditorium in Gardiner, Montana for the Gardiner P.T.A.

B. Ranger-Naturalists

From the many applications which have been received for the position of Ranger-Naturalist, selection is soon to be made of the three men to fill the vacancies for the 1935 season.

II. [illegible]

A. Administration

The Park Naturalist has been occupied with the various projects which have included the supervision of the naturalists work, and of the five C. C. C. men working for the museum. Several conferences on matters pertinent to the department have been attended, and the usual routine has taken considerable time. Several days were devoted to the perusal and study of the files of applicants preparatory to selecting Ranger-Naturalists for the coming summer. Additional time was spent in preparing manuscript for Nature Notes. One day was spent in going to the Norris Geyser basin to secure samples of hot water.

Assistant Park Naturalist Crowe, in addition to the lecture work which has already been covered, has conducted classes in music at the C.C.C. camp once each week, supervised the work of three C.C.C. men in their work on the herbarium, photographic files, and in developing and printing pictures for the E.C.W. and the department. In cooperation with the E.C.W., he spent three days at the Slough Creek Ranch securing pictures of the trapping and slaughter of Elk. He accompanied Mr. Bauer to Norris to secure water samples and to make thermal observations. The Hot Spring observations were made by Mr. Crowe this month.

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Junior Park Naturalist Towns has supervised and assisted with the work of three C.C.C. men on museum accession records, copying of old manuscripts, and in the renovation and alteration of two of the storage rooms in the Mammoth museum basement. He has also devoted time to work in the dark room getting out prints for special reports. One field trip was made to the scene of the elk slaughtering operations near Mammoth to secure pictures. He has spent considerable time too, on the usual routine of the office, typing, filing, accessioning, etc. Mr. Towns has spent several days in editing the manuscript for Nature Notes, and in preparing drawings for this publication.

B. Nature Notes

The January-February issue of Nature Notes has been prepared and will be ready for distribution in the near future. The subject for this edition is "Geology in Yellowstone."

C. Library

Books in circulation.....
Books received..... 9
Magazines received.....87
Magazines in circulation..... 7
Pamphlets received.....27

Two days were devoted to library accessioning.

D. Museums

One C.C.C. enrollee has worked the entire month on the Museum Accession records, and a second man has assisted with this work for seven days.

A third C.C.C. assistant has devoted all but three days of the month to renovation and alteration of the two museum accession storage rooms. Both of these projects are going forward under the direction of Naturalist Towns.

E. Equipment

Four new lamps have been purchased for use on the work tables in the laboratory.

F. Photographs

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E.C.W. Ezra Nichols assigned to photographic work under supervision of the Naturalist Department.

Park Naturalist C. Max. Bauer at the Norris Museum, Feb. 25, 1933

Bear skeleton and skulls prepared in the park museum laboratory

F. Photographs

Negatives in use..... 6
Prints sent out.....129
Negatives developed.....251
Number of prints made.....776

The majority of these last two items were made in co-operation with the E.C.W., but the work was directly under the supervision of Assistant Naturalist Geo. Crowe.

G. Lantern Slides

Slides used during the month.....385

H. Publicity Clippings

No work done in February, but the file is current through December.

I. Thermal Activity

Observations by Assistant Park Naturalist Crowe.

The present activity on the Mammoth Hot Springs formations indicate the possibility of greater activity during the coming summer than last year.

Angel Terrace

The new outlets to the south, almost inactive last month, are now flowing again. The total flow is about the same as last month.

Blue Spring

There very little change from last month, but there is no over-flow now to the south.

Pink Spring

This spring is flowing as strong as last year, a decided increase since last month.

Cleopatra

The flow from the old outlet on the north side has almost ceased.

Cupid's Cave Spring

This spring is now flowing strong. The pool has also filled again after being dry for several months.

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Green Spring
Has increased at the upper outlet and the overflow is filling and coloring several basins toward Clematis Gulch. Temperature of this spring, 156 degrees C.

Jupiter Spring
No change this month over January.

Minerva Spring
The higher outlet has ceased flowing, but there is considerable overflow along the northeast edge.

[illegible] Mound
No change

Palette Spring
This spring is showing a marked increase with three large outlets flowing. Several basins along the east edge are filled again. Seventy-five percent of the flow is East of the Devil's Thumb. The west edge is still dry. There is a noticeable increase in the deposition of travertine on the upper slopes. The over flow water almost reaches Orkan.

???....The New Spring
Has now increased to a diameter of twenty-five feet as the water level has raised. It is overflowing across the trail and has formed another pool about 10 ft. in diameter. Little algae is now in evidence, and the water is an opalescent blue in color.

Main Spring is now flowing from two outlets. Mound Spg. no change. Opal Spring slight increase. Temperature of 157 degrees C.

K. Personnel

The permanent personnel of the Naturalist Department was as follows:
Park Naturalist C.Max.Bauer, on duty all month.
Assistant Park Naturalist Geo.C.Crowe, on duty all month.
Junior Park Naturalist William E. Kearns on duty all month except for 4 days sick leave.
Five C.C.C. enrollees were on duty for the entire month of February: They are Edward Black, Clyde Stewart, Herbert Aldridge, Lucas Howard, and Earn Nichols. Howard McNulty was replaced by Marion Hough and worked to the end of the month.

Respectfully submitted,

[signature]
Park Naturalist

CC Director
Mr. Demaris
Drs. Hall and Russell
Museum
MMM:K

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CE OF THE SUPERINTENDENT

April 1, 1935

[illegible]

for

[illegible]

I. CURRENT [illegible]:

A. Public Contact

Visitors:

F. V. Russell, Fiscal Account Office of Secretary of Agriculture, Washington, D. C.

[illegible] Merrifield, [illegible] Chicago, Illinois

Prof. Gieseker, Associate Agronomist, Bozeman, Montana

Messers, Johnson, Moses and Leiter, General Housing Committee

Lieut. Leon [illegible] Hawley, District Chaplain [illegible], [illegible] Montana

Reverend [illegible], Missionary from India

Reverend [illegible], Livingston, [illegible]

Lectures:

The last lecture of the winter series for Mammoth residents and employees was given on March [illegible]; subject.. "The National Park Service," by William [illegible] Hearns and J. [illegible] Emmert.

Lectures at the C.C.C. Camp No. [illegible] near Mammoth were continued during March by the [illegible] employees as follows:

March 6: "Skeletons and Internal Structures of Animals," Harlow D. Mills — 85 present

March 13: no lecture

March 20: "Volcanism," William [illegible] Hearns — 111 present

March 27: "[illegible] Projects for the Coming Year," J. [illegible] Emmert — [illegible] present

At a general meeting of the [illegible] Mr. [illegible] lectures [illegible] movies to 167 people on March 22.

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B. Ranger-Naturalists

Ranger-Naturalists for this coming season were selected on March 16. Fifteen men who served last year will return and three new men were chosen.

II. Permanent Projects

A. Administration

Park Naturalist Bauer supervised the varied work of the department. Plans for the future development of museum and educational facilities were worked on and the outline of development was prepared and approved by the Superintendent. Ranger-Naturalists for next summer were selected and plans for summer programs tentatively made.

Assistant Park Naturalist Crowe spent most of the month supervising and working on the filing of photographs and filing and checking labels in the herbarium.

Junior Park Naturalist Kearns illustrated Nature Notes and the Superintendent's Annual Report. He also spent time and work on correspondence of the Yellowstone Library and Museum Association in connection with purchasing books for the Library and also ordering publications for the coming summer. He also supervised the work of 3 C.C.C. enrollees, two of whom worked on museum accession records, and one on storage facilities. On March 13, Mr. Kearns assisted the Protection Department with the game count, making a ski trip to the Gardiner River drainage and back around Bunsen Peak. At the end of the month Mr. Crowe and Mr. Kearns made the usual Hot Springs observations.

B. Nature Notes

The January-February issue, No. 1 and 2, Vol. XII, was mimeographed and distributed. 843 copies were printed, and of this number, 750 copies were mailed to subscribers, [illegible] were kept for the files, and 43 were distributed to the personnel. The subject of the issue was "Research in Yellowstone National Park."

C. Library

Books in circulation.....[illegible]
Books received during March.....51
Magazines " " " .....[illegible]
Pamphlets " " " 60
Magazines and pamphlets in circulation.....1[illegible]

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Two days were devoted to accessioning books for the library, and working on the accession record.

D. Museums

Two C.C.C. enrollees worked the first three weeks of the month on the catalog cards and museum accession records.

One enrollee worked three weeks on building and painting shelving in the storage rooms.

On March 16th., the Mammoth Museum was open to the public from 7:00 to 9:00 P.M. A total of 101 visitors were in attendance.

E. Equipment

Six 400ft. reels and humidors for 16mm. movie film were received.

F. Photographs

One C.C.C. enrollee continued with work on photographs under the supervision of Assistant Naturalist Crowe.

Negatives in use.....1
Prints sent out.....22
Negatives developed.....340
Number of prints made.....1076

G. Lecture Slides

Slides were sent from Yellowstone to Washington for the use of George F. Beggley and Mrs. Berne Beggley in their lectures given there during the month.

Slides used during the month....149

H. Publicity clippings

No work done on clippings this month.

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I. Thermal Activity

Observations by Assistant Naturalist Crowe and Junior Naturalist Kearns.

Angel Terrace
The flow from the springs to the south is still strong, and where it flows in one narrow channel, measures six inches wide by two inches deep. A large piece of the main formation has broken off and fallen on the front slope.

Blue Spring
Decreased greatly the first part of the month, but has increased slightly and is now flowing toward Pulpit Terrace with a small overflow also to the south.

Baby Spring
This spring continues with a strong flow, running over the road and to the west. The coloration and algae are beautiful.

Cleopatra
There is evidence of renewed activity as the flow to the north has started again, [illegible] filling with water.

Cupid's (Cave) Spring
Continues with a strong flow and beautiful coloration of the algae.

[illegible] Spring
Activity approximately the same as for February with active flow continuing toward Clematis Gulch.

Jupiter Spring
Slight activity with additional flow to the north.

Minerva Spring
Increase in activity with overflow to the south-east, and a continuance of overflow to the north-east.

Orange Mound
The flow continues about the same but with a very audible "buttering." The small bubbler immediately at the eastern base of Orange Mound, is evidencing renewed activity.

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Palette Spring

Continues to show an increase in flow with [illegible] now flowing strong and at a depth of about two [illegible]. [illegible] major flow continues [illegible] of the [illegible] Thumb.

[illegible] New Spring

This beautiful new spring has increased in size until it now measures about forty by sixty feet, and from ten to twelve feet in depth. It is now overflowing [illegible] and is becoming more beautiful each week. Orange colored algae is now much in evidence around the edges.

Main Spring

Activity has practically ceased.

Seal Spring

Continues with activity about the same as in February.

Cone Spring

Very active, bubbling vigorously, and overflowing steadily.

[illegible] Personnel

The staff consisted of:

Park Naturalist C. Max. Bauer on duty all month except ½ day of sick leave.

Assistant Park Naturalist [illegible] on duty all month except ½ day sick leave and ½ day annual leave.

Junior Park Naturalist [illegible] on duty all month.

Six C.C.C. enrollees worked in the museum as follows:

Edward Black, March 1 to March 22; [illegible], [illegible] to March 22; Marion Hough, March 1 to March 22; and Herbert Aldridge, Lucas Howard, and Ezra Nichols, from March 1 to March 22.

Respectfully submitted,

C. Max Bauer

C. Max. Bauer
Park Naturalist

CC Director
Dr. Bumpus
Drs. Hall and Russell
[illegible]
[illegible]

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

E OF THE SUPERINTENDENT

May 1, 1935

REPORT OF THE NATURALIST DEPARTMENT
for
APRIL 1935

I. CURRENT OPERATIONS:

A. Public Contact

Visitors:

Mr. Morgan, Office of Sub-Marginal Land and State Parks, Omaha, Nebraska.

Mr. L. A. Hudson, United States Disbursing Office, Denver, Colorado.

Mr. A. F. Miller, Sub-Marginal Land Office, Omaha, Nebraska.

Lectures:

Lectures at the CCC camp No. 1349 were given on April 3 and April 10 by National Park Service employees as follows:

April 3: "Fire Prevention and Organization" by Assistant Chief Ranger, Maynard Barrows

April 10: "Fire Fighting, Methods in Organization" SCW Foreman, Art Jacobson

Due to comparative disorganization of the camps at this time, further lectures were not given during the month, but will be started in May as soon as the camps are reorganized for the summer.

While on his vacation, Assistant Park Naturalist Crowe gave several lectures in schools as follows:

April 7: Zion National Park "Yellowstone National Park in Winter" 125 present

April 17: Mammoth Grade School on "Trip to Zion National Park"

April 18: Six talks to science classes in the High School in Ogden on "The Geology and Animal Life of the Park" 875 present

April 19: To Junior High School in Ogden "Yellowstone National Park in Winter" 1000 present

April 28: Evangelical Church in Livingston on "The Birds and Flowers of Yellowstone" 100 present

B. Ranger Naturalists

Two letters of instructions were sent out to the ranger naturalists from the Superintendent's office, and Memoranda 1 and 2, also containing instructions for the ranger naturalists for the coming season, were mailed out from the office of the Park Naturalist.

Mr. Harlow B. Mills, who was selected as a ranger naturalist for the coming summer, has decided to continue his work as Naturalist Assistant, [illegible], under the Wildlife division.

II. PERMANENT PROJECTS

A. Administration

Park Naturalist Bauer spent a large part of the month planning schedules and programs for the summer season. Ranger naturalists assignments were studied and a relief schedule prepared. Plans for the improvement of the Mammoth and Old Faithful Museums were worked on and discussed with Acting Superintendent Emmert and Architect Hill. Most of the remainder of the month was spent on supervision and routine matters. On April 22, the Park Naturalist and Assistant to the Superintendent Joffe took a trip into the Park as far as the snow plow had proceeded up to that time, which was at Canyon Station. Snow depths in the Park are consistently deeper than usual, averaging about 3½ feet all the way from Swan Lake Flat to the Canyon.

While on leave the first two weeks of the month, the Assistant Naturalist visited the Public Library in Butte, Montana, the Public Library and Chamber of Commerce, Ogden, Utah, and attended to some business for the Museum in Salt Lake City. From that point he was accompanied by David Condon, Ranger Naturalist, of Provo, to Zion National Park where he spent two days with Park Naturalist Pressnall.

Talks were given at Zion and six in the High Schools of Ogden.

Valued contacts were made with various members of the faculty of the Brigham Young University at Provo. Professor Tanner presented several booklets for the library, and Professor Harrison and David Condon presented two slides each for our lecture sets.

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Since his return Mr. Crowe has checked and made ready the equipment for the summer stations of ranger naturalists.

He shipped a specimen of obsidian to the Ft. Benton High School, Montana, and a sample of hot spring water to Miss Maude Ellen Lynch, Dressmaker of Sioux City, Iowa.

He also lettered and numbered forty new books and pamphlets for the Library shelf lists and assisted with the assembling and mailing of Nature Notes.

He supervised the filing of more than 100 photograph negatives and the printing of more than 900 prints for various reports and files.

Through a letter to a personal friend, Harold A. Perry of Los Angeles, former Assistant Naturalist of Yosemite Park, he received a fine picture of the late Mr. Dale Fineman, for display in the Mammoth Museum.

Mr. Crowe gave a talk to the Mammoth school on April 17 and at the Salem Evangelical Church in Livingston on April 28. One hundred were present.

He also prepared the thermal report.

Junior Park Naturalist Kearns was on duty from the 1st to the 17th inclusive, during which time he took care of the filing of correspondence and reports, attended to the secretarial work of the Yellowstone Library and Museum Association, and similar matters. He also assisted in mimeographing and mailing the March-April issue of Nature Notes.

B. Nature Notes

This latest issue of Nature Notes for March-April, 1938, numbers 3 and 4 of Volume 13 were mimeographed and distributed. The issue was prepared by the ranger force and inadvertantly sent to a large list of newspaper and publicity offices, so that the edition was mailed out to about 1000 addresses. Our regular mailing list at this time consists of about 700 and the normal edition is about 800. The principal subject discussed by the Protection Department in Nature Notes was the elk dispersal and general conditions relating to the wildlife in the Park.

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C. Library

Books in circulation.....71
Books received during April.....21
Magazines received during April.....30
Pamphlets received during April.....73
Magazines and pamphlets in circulation.... 7

Mr. Crowe spent some time on lettering and numbering 40 new books and pamphlets for the Library.

D. Museums

Work. Plans for extension of the Mammoth Headquarters, Museum, were discussed with Acting Superintendent Lambert and Architect Hill. Preliminary work has been done to make the upstairs of the present building suitable for extensions of the Museum. It is the tentative plan to use one large room upstairs for an art and picture gallery, which may also be used during the summer months as an auditorium in case of rainy weather, so that the camp ground amphitheater can not be used. Other tentative plans include a bird room, a plant room, and a historic relic room for the second floor.

Accessions. Only a small amount of time was devoted to Museum accessions, probably less than half a day, since the CCC men left in March.

E. Equipment

During the month a herbarium case 10x24x4 has been built in the basement, and will be located in the study collections room or Museum laboratory. This is being painted at the present time and will take care of our entire herbarium, with some room to spare.

A 4 inch telephoto lens for movie camera was purchased; also a triple purpose splicer for 16 mm. films and a block letter titler outfit; also filters for using in connection with the 16 mm. movie camera. This gives us a fairly complete outfit for taking 16 mm. movies and preparing them for use and filing.

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F. Photographs

One CCC enrollee continued with work on photographs under the supervision of Mr. Crowe.

Negatives filed.....140
Negatives in use..... 85
Prints sent out..... 3
Negatives developed.....100
Prints made.....800

G. Lantern Slides

Slides used during the month.....250

H. Publicity Clippings

Twelve packages of clippings were received during the month, but none were filed.

I. Flora

Buttercups are in bloom on the hot spring terraces. A few dandelions are blooming in Mammoth. Lupins are beginning to blossom.

J. Fauna

On April 1st Kearns and Crowe with Ranger Childs and Mr. Mills took pictures of a Black Bear in its hibernation den near Mammoth camp ground.

K. Thermal Activity

During April the snow has melted rapidly, but the flow of surface waters has not affected the flow of the springs to any noticeable degree. A number have decreased in flow during the month.

Angel Terrace

Minor changes since March. The major part of the flow continues on the south side.

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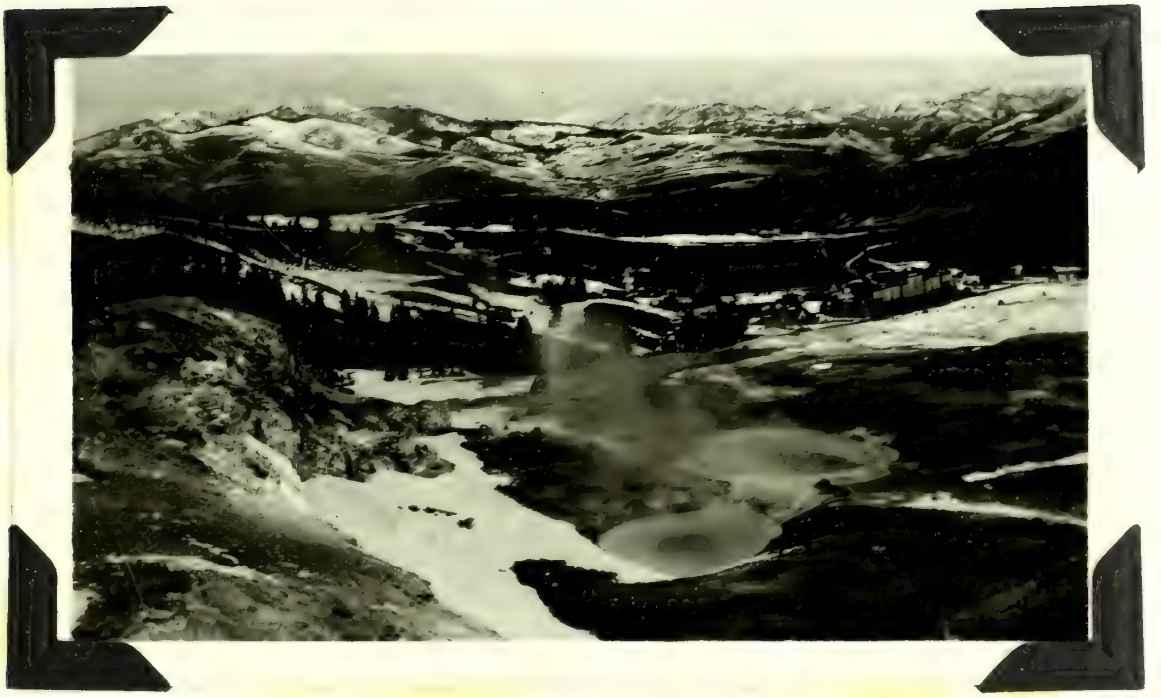
10262-1 A log bear trap used by poachers in about 1900; located on the north slope of Mt. Sepulcher, 3/4 mile inside old Park boundary. Park Naturalist Bauer in picture. 4/21/35.

10262-2 Log bear trap showing detail of construction. Pegged with wooden pins. Repaired in center where bears had gnawed a hole. 4/21/35.

10582-1 A log bear trap used by rangers in about 1920; located on the north slope of Ta. Depuledeer, 4/4 mile inside Park boundary. Park Naturalist Jones in picture. 4/21/35.

10582-2 Log bear trap showing detail of construction. Pegged with wooden pins. Repaired in center where bears had gnawed a hole. 4/21/35.



The new spring near Main Terrace, overflowing from the larger pool into the smaller pool. March 8, 1935

The new spring greatly enlarged, the water level having raised fourteen inches in ten days. March 18, 1935

Blue Springs
Steadily decreased. There is a slight overflow toward Jupiter and a little water flowing to the south and to the north toward Mound Terrace.

Baby Spring
This spring is still flowing as heavily as in March.

Cleopatra Spring
Still increasing slowly.

Cupid's (Cave) Spring
This spring has decreased more than half during the past month.

Hymen Spring
Is flowing from two outlets and most of the old basins to the northwest are filled with water.

Jupiter Spring
No change.

Main Spring
Shows just a little activity on the east end.

Mound Spring
No change.

Minerva Spring
Has almost stopped flowing.

New Spring
This spring has raised its water level about six inches and the overflow to the north and east on the lower slope almost to Minerva.

Opal Springs
Continues as in March as one of the most beautiful in its coloring.

Orange Spring Mound
Shows a small flow on both the east and west sides.

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Palette Spring

This spring has decreased over half in the past two weeks. There is no water flowing on the west side of the Thumb.

Soda Spring

Is full to overflowing, with the water level 10 inches deeper than last fall.

Sulphur Spring

This spring, just above Soda Spring, is about four inches deeper. Much sulphur has been deposited during the winter.

A slump or sink 10 feet in diameter and 1½ feet deep is quite noticeable in the center of the old Parade Ground.

An opening one foot in diameter has broken through in the old travertine under the Post Office parking area.

Excavations to a depth of ten feet for the new apartment house foundations are all in old hot spring deposits.

L. Personnel

The staff consisted of:

Park Naturalist, C. Max Bauer, on duty all month.

Assistant Naturalist Crowe was on duty except for annual leave from April 2 to April 18 inclusive.

Junior Naturalist Kearns was on duty except for annual leave from April 18 through the end of the month.

On April 2, Miss Catharine Harris joined the staff as temporary clerk stenographer. From the 11th to the 22nd of the month she spent a large part of her time assisting the committee on the Submarginal Land Program.

One CCC enrollee, Herbert Aldridge, assisted in the museum work throughout the month of April. Part of that

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time he was working on developing and printing pictures. The rest of the time he spent on plate files and the herbarium. Two other CCC boys, [illegible] and Ezra Nichols, who have been working in the Museum were turned back to the foreman on April 6 to be put on other work, as they were wasting their time here.

Respectfully submitted,

C. Max Bauer

C. Max Bauer
Park Naturalist

CC Director
Dr. Bumpus
Mr. Hall
Museum

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OFFICE OF THE SUPERINTENDENT

June 1, 1935

REPORT OF THE NATURALIST DEPARTMENT
for
MAY 1935

I. CURRENT OPERATIONS:

A. Public Contact

Visitors

Dr. and Mrs. Raymond Binford, Guilford College, Guilford, North Carolina

Dr. and Mrs. Walter Beelye, Worcester, Massachusetts.

Twenty one students from the Butte School of Mines visited the Museum and were accompanied to Old Faithful by Dr. Bauer and Mr. Crowe.

In addition, some fifty early tourists were visitors in the Museum during the month of May.

Lectures

Mr. Toll and Mr. Crowe spoke at CCC camp No. 1349 during May, although there has been no settled organization there since about the middle of April, due to the fact that there were only a few men in the camp. With the new group of men coming in, we will plan the contacts with the CCC men, in conference with the educational adviser.

B. Ranger Naturalists

At the close of the winter season, we made our selection of ranger naturalists, which included 15 men whom we were bringing back because they had served satisfactorily in previous seasons. We had made a selection of three new men. However, these had no sooner been approved and appointed than various ones of the old men resigned to take other positions: Mr. McDougall to become Naturalist Technician for the State Parks Division; Dr. Mills to continue on his present work until the first of July, after which time he will go to Montana State College as Assistant Professor; Mr. Oberhansley and Mr. Condon having accepted positions in Yellowstone Park on the Ranger force; Mr. Spalding having taken a position with the University of Wyoming Summer School; and Mr. Frodine having accepted a position with the state of Minnesota on doing work in parasitology.

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Therefore, it has become necessary to choose new men to fill these places, and the present status is 11 old men with experience and 7 new men, until after July 1, after which time we will have 8 new men.

Special effort will be put forth this season to train the men in the three days preceding the opening of the season. This is, no doubt, insufficient, but it does not seem possible to extend it at this time.

II. PERMANENT PROJECTS

A. Administration

Park Naturalist Bauer was on vacation from May 1 to May 20, inclusive, during which time he visited Mesa Verde, Grand Canyon, Zion, and Bryce National Parks. The Naturalist Department was in charge of Assistant Park Naturalist Crowe. Much of the work of selecting new men to take the place of those who resigned devolved on Mr. Crowe, and fortunately the Superintendent was present in the Park so that this work was not delayed.

Mr. Crowe has shown especial interest in protection of the springs and has tried in various ways to prevent vandalism, such as the throwing of rocks in the pools. This sort of thing usually happens when there are only a few visitors coming into the Park at the beginning of the season, and is difficult to handle as there is not a sufficient number of rangers or ranger naturalists to care for the scattered visitors.

During the last ten days of the month, the Park Naturalist was engaged in making summer plans, detailed schedules for each point on the Loop, and revising a history outline on the early history of the Yellowstone region.

Junior Park Naturalist Kearns was on vacation until May 3. During the remainder of the month he has been busy with the sales publications, various matters in connection with filing, and has taken some splendid pictures of wildlife, among them telephoto movies of swan, geese, and cranes. He has also done

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some work on preparing the next issue of Nature Notes. Mr. Kearns also made two trips to the Lewis and Clark Caverns; one on May 4 with a party from the Montana Governor's Office, and another on May 17 and 18 with a party from the N. P. S., State Park Division.

The Naturalists attended most of the sessions of the Ranger Conference which was held on May 22 and 23. Mr. Crowe also attended a three-day conference on the Six Year Program.

B. Nature Notes

The May-June issue of Nature Notes will be largely on the subject of Indians. Much of the text is already prepared and edited, but the mimeographing will be done during the early part of June.

C. Library

Books in circulation.....86
Books received during May.....13
Magazines received during May.....12
Pamphlets received during May.....87
Magazines and pamphlets in circulation..... 6

D. Museums

Accessions. Approximately six days were spent by the secretary in working on museum cataloging.

E. Equipment

There has been no equipment received during May.

F. Photographs

One CCC enrollee continued to work on photographs during the month of May, under the supervision of Mr. Crowe

Negatives filed.....147 (chiefly [illegible])
Negatives in use.....136
Prints sent out..... 78
Negatives developed..... 60

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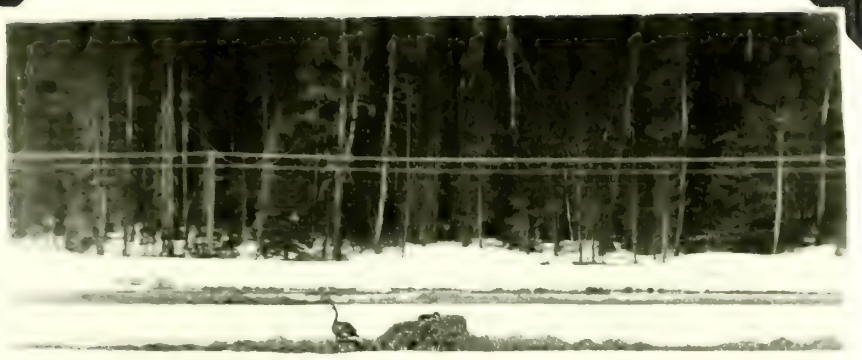

10305-2 Canadian geese and nests, showing female on nest with gander on guard.

10305-3 Nest of Canadian goose containing four eggs, showing the structure and the downy lining of the nest.

G. Lantern Slides

Slides used during the month.....182
Slides repaired during month..... 25

H. Publicity Clippings

There were 18 packages of clippings received during May, and all were stored but none filed.

I. Thermal Activity

Angel Terrace The flow of water has increased and the travertine is depositing more rapidly. Activity continues to the north and to the south. The south outlet has the greater flow.

Baby Spring This spring has increased over last month and shows many varieties of algae and travertine deposits.

Cleopatra Spring This spring also has increased its flow. Two outlets are active about forty feet apart.

Hymen Spring No change

Jupiter Terrace There is no flow from the spring, but waters from Blue Spring are flowing over the south portion.

Main Terrace Shows a little flow at each end.

Minerva Spring has increased slightly.

Mound Spring has increased.

Narrow Gauge is sputtering at several points with no overflow. Sulphur is depositing in these vents.

Palette Spring has not increased in flow since the decline of last month.

Pulpit Terrace Two outlets are now flowing above this terrace.

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Orange Spring Mound No change from last month.

Opal Spring is increasing and continues to be one of the most beautiful formations.

New Spring This spring, mentioned last month, has continued to flow strong. The overflow has reached a point below Minerva Spring. Where it drops over the edge of Main Terrace a beautiful waterfall has developed. The pool covers the same area. Temperature, 154° F.

Other New Activity Twenty feet above this new pool in an old portion of the formation, hot water has appeared in an 8 inch crack. The temperature is 158° F. and the water is within 18 inches of the surface. Much gas is being liberated at this point.

Another new spring broke out about May 15th on the formation below Highland Terrace. The water is spurting up from 2 to 4 inches in height along an old crack. Travertine is being deposited over an area 25 feet in diameter. Temp.- 152° to 154° F.

A small seepage started during the month on the west side of the Devil's Kitchen parking area. It has not increased in size.

It appears that melting of snow and heavy spring rains on the higher slopes have had a pronounced effect on the flow of various springs in the Mammoth area.

Upper Geyser Basin - Reported by Ranger Skinner
A number of the hot springs and geysers in the vicinity of Old Faithful were more active in May than for a number of years, due probably to the cool weather and the consequent slow melting of snow, which permitted most of the moisture to go directly into the soil and into the fissures which feed the geysers.

Hot springs which show a greater activity and a greater flow of water are Twin Sisters Spring, Black Pearl Pool, Sapphire Pool, and many of the smaller springs.

Old Faithful, Daisy, Riverside, Grand, The Grotto, Castle, and Sawmill geysers are apparently expelling more water than normally, but the height of play in some cases appears to be

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somewhat less. The Castle, Grand, and Sawmill are in eruption at more frequent intervals than last year, the latter being almost continually active.

L. Personnel

Park Naturalist Bauer was on annual leave from May 1 to May 20 inclusive and on duty at headquarters during the remainder of the month.

Assistant Park Naturalist Crowe was on duty all month.

Junior Park Naturalist Kearns continued his annual leave until the close of the 2nd and was on duty during the remainder of the month, except for one day taken off on annual leave on Monday, May 27.

Miss Catharine Harris, temporary clerk-stenographer, was on duty all month. Several days were spent in working for the Sub-marginal Land committee; also 2½ days spent typing on the Six-Year Program for the Superintendent's office. The remainder of the month was spent on general office work.

Herbert Aldridge, a CCC enrollee, has continued to work throughout most of the month of May on photograph filing, developing and printing of negatives, and also has been coached on taking pictures. He has a keen interest in this work and will, no doubt, render good service as well as learn some interesting things about the work.

Respectfully submitted,

C. Max Bauer
Park Naturalist

CC Director
Dr. Bumpus
Mr. Hall
Museum

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E OF THE SUPERINTENDENT

July 1, 1935

REPORT OF THE [illegible]
for
June, 1935

I. CURRENT OPERATIONS:

A. Public Contact

Visitors

Although at the beginning of the month the pre-season travel of last year was considerably above that of this year, there has been a gain throughout June so that by the end of June there were three thousand more visitors than for the same month last year. Mammoth Museum opened on June 2 and was open each day until June 15 from 8 A.M. until 5 P.M. After that date it was open from 8 A.M. to 8 P.M. The Norris, Madison, Old Faithful and Fishing Bridge Museums opened on the morning of June 16 as follows: Norris from 8 A.M. to 8 P.M.; Madison from 8 A.M. to 8 P.M.; Old Faithful from 8 A.M. to 9:00 P.M., and Fishing Bridge from 8 A.M. to 8 P.M.

Dr. D. N. Waddia, Superintendent of the Geological Survey of India visited the Park from June [illegible] to June 26.

Miss Pinehart, Nature Lecturer for the Campfire Girls of California, visited the Park for a week.

Mr. Joseph Taylor, Attorney for the National Park Service, San Francisco, California.

Mr. Harold Mueller, special correspondent for the Daily Oklahoman, Oklahoma City, Oklahoma.

Lectures

Assistant Naturalist Crowe spoke at Butte, Montana Rotary Club June 6 and also broadcast the same day from Butte.

The Campfire lectures at each of the main points, Mammoth, Madison, Old Faithful, Thumb, Fishing Bridge, and Canyon started on June 16. For several days the lectures were continued in the lodges at Canyon and Mammoth. These were the only lectures that were held in any of the operators' buildings and preceded the usual savage program which is given at these lodges.

For various reasons it seemed best to discontinue the lectures in the lodges and hold all of our evening nature talks in the open, in amphitheaters or, as at Canyon, in the Ranger Station community room. Therefore, beginning on June 22, all evening talks of the Naturalist Department are being entirely under the supervision of the Park Naturalist, and visitors may have their choice of attending the naturalist program or that given by the savages in the lodges.

Our plan this season is to schedule ahead for two week periods giving the name of the speaker and the title of his talk. These sheets are mimeographed and sent to each information station so that visitors can be advised in advance of the lectures to be held at each point on the Loop.

B. Ranger Naturalists

The pre-season trip and activities included 17 ranger naturalists and 9 temporary rangers. Permanent men consisted of Mr. Crowe, Mr. Kearns, Mr. Elliott, and the Park Naturalist, who accompanied the group around the loop on a three-day instruction period. It is believed that this pre-season training was the most successful of any yet undertaken and has developed an enthusiasm and spirit of cooperation among the men which is very fine. Although nine of the ranger naturalists are new men and are spending their first season in the Park, they are, without exception, doing very good contact work.

II. PERMANENT PROJECTS

A. Administration

Park Naturalist Bauer was mainly occupied during the month in administering the affairs of the Naturalist Department working out the plans for the summer season and caring for the usual amount of correspondence which requires his attention. This correspondence work averages about two hours per day. Some work was placed on the last issue of Nature Notes, but most of the writing and

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illustrating was done by Junior Park Naturalist Kearns.

Assistant Park Naturalist Crowe took care of the opening of Museums; the preparation of quarters for the Ranger Naturalists and many details of planning and preparation for the season. He aided in all supervision of the regular work and the programs of the ranger naturalists. Mr. Crowe also helped with the assembling and mailing of the May-June issue of Nature Notes.

Junior Park Naturalist Kearns has taken five field trips for the purpose of obtaining motion pictures of wild life, particularly birds, and is obtaining very excellent results. Kodachrome films are being taken of the hot springs and colored pools. Mr. Kearns also handles the publications for sale and the bookkeeping connected with it. Both Mr. Crowe and Mr. Kearns are doing several days of relief work each week, which puts them in close contact with the activities of the ranger naturalists and gives them an opportunity to observe and develop methods of handling this work.

The improvement of exhibits and the installation of cases which are not at present installed has given the Department considerable concern as we do not have the time nor the men trained for this kind of work. Some of this work has been done. However, there is so much to be done that it would require the full time of a trained museum preparator to handle it properly. It is hoped that a position of museum preparator may be established soon in Yellowstone Park.

B. Nature Notes

The May-June issue of Nature Notes was completed, mimeographed, and mailed to approximately 800 persons. The issue had a cover showing Chief Joseph of the Nez Perce tribe and dealt with Indians of the region and particularly with the Nez Perce War.

C. Library

Several days were spent by the secretary in completing the library card cataloging.

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Books in circulation.....156
Books received during June..... 30
Magazines received during June..... 17
Pamphlets received during June..... 66
Magazines and pamphlets in circulation.. 10

Mr. Crowe spent some time during this last month in the numbering and processing of 65 books.

D. Museums

One wolverine skin was received in June for the Museum study skin collection.

E. Equipment

On June 30th a new Victor 16 mm Animatophone was received. Also during the month there were added to our equipment three black Badger covers and 300 black leaves to fit same.

F. Photographs

One CCC enrollee continued to work on photographs during the month of June under the supervision of Mr. Crowe.

Negatives filed.....160
Negatives in use.....103
Prints sent out..... 75
Negatives developed..... 40

G. Lantern Slides

Slides used during the month.....914
(Majority for summer lectures at various stations)
Slides repaired during the month..... 27

In addition to the use of the above mentioned slides, Mr. Kearns experimented with two reels of movies of winter life in Yellowstone.

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H. Publicity Clippings

A large number of clippings have been received during the month of June.

I. Thermal Activity: by Assistant Naturalist George C. Crowe and Junior Naturalist William E. Kearns

Angel Spring The south outlet of the Angel Terrace has decreased somewhat since May, but the color of the main spring flowing over the terrace to the southwest continues much as last month with particularly beautiful coloring.

Baby Spring which was flowing a strong head of water the early part of June had practically ceased all activity by the end of the month.

Cleopatra Spring has increased in color since last month. It is overflowing to the northeast and is very beautiful at this time and continues with about the same activity.

Hymen Spring shows slight decrease in flow.

Jupiter Terrace Jupiter Spring is at present inactive and the waters which have been flowing over the south portion of Blue Spring have practically ceased.

Main Terrace continues about the same as last month as far as flow is concerned but with more coloring.

Minerva Spring has practically ceased.

Mound Spring continues to show evidences of renewed activity.

Narrow Gauge continues flow with some spurting of water and a continuation of sulphur deposits.

Palette Spring continues to flow to the right of the Devil's Thumb much as it did last month.

Pulpit Terrace The two outlets reported flowing last month continue activity with some remarkable coloring from the algae.

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Orange Spring Mound has decreased somewhat from the opening to the northwest but is flowing slightly to the southeast.

Opal Spring evidences about the same activity as last month.

New Spring showing a remarkable activity suddenly suffered a set-back when a cave-in in the first vent in the form of a long ragged crack robbed the spring of the larger portion of its flow. The water dropped to a point whereby one pool showed no activity at all; after some time it seemed to seal this crack somewhat and overflowed into the two basins and at the end of the month two beautiful pools of opalescent blue remain as evidences of this surprising new activity. Judging by the rise in the water level in the past week, we may expect this spring to again flow with a waterfall effect over Main Terrace with the run-off extending again toward Minerva.

Other Activity The spring reported some twenty feet above the new spring in the hogback-like formation continues to flow to within some foot and a half of the surface with a slight overflow at the end of the crack.

The new spring reported as breaking out on May 15 on the formation below Highland Terrace continues equally as active as reported last month.

Two new and tiny springs, almost in miniature, have developed on the old trail between Palette and Cleopatra but have not developed sufficiently to create much interest.

Upper Geyser Basin - by [illegible]

Bonita Pool at the Daisy Geyser does not function as an indicator for play of the Daisy. I believe that the sign should be removed.

Brilliant Pool drains to a depth of from 12 to 24 inches during play of the Daisy Geyser.

Cliff Geyser has not been reported in eruption this season.

Daisy Geyser has to date had an interval of 95 minutes. The play is especially beautiful and powerful.

Giantess Geyser has not been seen in eruption this season to date.

Giant Geyser has played twice this current season.

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On June 18th Temporary Ranger Wayne Replogle observed the start of play at 5:15 P.M. Duration of play about two hours. Maximum height, 200 to 250 feet. Great activity of Bijou and Catfish during and after play of Giant.

On June 20th it started to erupt about 1:15 P.M. Completed play about 3:15 P.M. Maximum height as estimated by R. E. Kearns, 225 feet. This play of the Giant came after an interval of eleven days.

Grand Geyser has been playing at intervals of from 18 to 20 hours. The average spurts have varied in number from seven to ten. Duration of play has been about thirty minutes.

Handkerchief Pool has not been filled this season and at the present time is merely a little pool about ten inches in diameter. It apparently at this date is not affected by play of Rainbow Pool.

Jewel Geyser is an exceedingly interesting geyser both for its beauty and active manner of play. The formation a few feet east of Jewel has been broken but has not affected the play. The area however, is dangerous and the demonstrations with handkerchiefs has been dispensed with.

Riverside during the month of June has had an interval of more nearly nine hours than the customary eight hours.

Rainbow Pool has not been observed in eruption during the month of June but the formations appear to have been drenched and washed out as though it might have played during the night.

Sapphire Pool appears to have an interval of very nearly 12 hours.

Turban Geyser The initials F.B. Smith and underneath, 1930, noted on the south end of the Turban Geyser. Visible only when the crater is dry.

L. Personnel

Park Naturalist Bauer on duty all during the month of June.
Assistant Park Naturalist Crowe on duty all month.
Junior Park Naturalist Kearns was on duty all month.
Temporary clerk-stenographer, Miss Harris, was on duty all month.
CCC enrollee, Herbert Aldridge, worked part of the month in the Museum, mainly on photography and photograph files. For ten days he was under quarantine and was not available for any work.

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YELLOWSTONE PARK, WYO.

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The following is a list of the Ranger Naturalists and the time of service:

Herbert Lystrup, Senior Ranger Naturalist, June 9 to June 30.
Arthur Nash, June 10 to June 30.
Philip Fix, June 16 to June 30.
Robert Fowler, June 16 to June 19 inclusive; from June 20 to June 25 on leave without pay due to illness; on duty from June 24 to the end of the month.
Lloyd Sweetman, June 16 to the end of the month.
Neil Miner, June 16 to the end of the month.
Howard Stagner, June 16 to the end of the month.
E. T. Bodenberg, June 16 to the end of the month.
R. J. Preston, June 16 to the end of the month.
A. T. Whisenore, June 16 to the end of the month.
L. Verle Watson, June 16 to the end of the month.
H. E. Stork, June 16 to the end of the month.
Myron Griswold, June 16 to the end of the month.
Jennings King, June 16 to the end of the month.
Harry Woodward, June 16 to the end of the month.
Truston Peery, June 16 to the end of the month.
Willis Smith, June 16 to the end of the month.

Laborers employed to care for the Museums and the Museums' grounds included the following:

Clyde Stewart, Mammoth Museum, June 3 to the end of the month.
Ross Ingersoll, Fishing Bridge Museum, June 10 to the end of the month.
Albert Lee, Old Faithful Museum, June 14 to June 27 inclusive.

Respectfully submitted,

C. Max Bauer
Park Naturalist

CMB:CH
CC Director
Dr. Dumpus
Mr. Hall
Museum

DEPARTMENT OF THE INTERIOR

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OFFICE OF THE SUPERINTENDENT

SUMMARY OF NATURALIST ACTIVITIES

~~week~~
For month ending June 30, 1935
~~season~~

Yellowstone National Park

Place	Field Trips: No.	Field Trips: Attendance	Auto Caravans: No.	Auto Caravans: No. Cars	Auto Caravans: Attendance	Lectures: No.	Lectures: Attendance	Special Parties: No.	Special Parties: Attendance	Museum: Attendance	Misc. Contacts: No.	Totals: Contacts Made	Publications Distributed: No.	Publications Distributed: $ Sales
Canyon	21	445				19	6085	2	52		8240	14,762		
Fishing Bridge	13	236	11	79	378	15	3808	2	25	7889	216	12,552		$ 106.80
Madison						63	1474	4	120	4636		6,230		
Mammoth	50	1216	12	124	462	18	1714	1	165	11979	400	15,936		159.50
Mount Washburn														
Norris	38	1101								5665		6,766		
Old Faithful	28	1691	14	322	986	29	12164	3	47	14726	130	29,744		128.70
West Thumb	36	1278				13	617					1,895		
Totals 1935	186	5967	37	525	1826	157	25802	12	409	44895	8986	87,885		$ 395.00
Totals 1934	171	10374	40	865	3004	185	25866	14	920	36428		76,592		

Park Visitors During Period: 31,973

Signed: C. Max Bauer
Park Naturalist

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

CE OF THE SUPERINTENDENT

NATURALIST DEPARTMENT

Summary Report July 1, 1934 to June 30, 1935

There has been no change in the permanent staff of this department during this period. The permanent staff as of June 30, 1935 consisted of:

Park Naturalist	C. Max Bauer
Assistant Park Naturalist	George C. Crowe
Junior Park Naturalist	Wm. E. Kearns

The summer staff for June 1935 consisted of 17 Ranger Naturalists, 1 clerk-stenographer, and 3 laborers or museum care takers. Three Ranger Naturalists were designated as Senior Ranger Naturalists in order that they might supervise the activities during the summer season at Fishing Bridge, Old Faithful, and Mammoth Hot Springs museums. On July 1st, 1935, 2 Ranger Naturalists were added, so the staff during the summer season this summer will consist of 19 Ranger Naturalists.

All museums were closed to the public on September 30, 1934. The opening dates for the museums in June, 1935 were as follows:

Mammoth Museum	June 5th
Norris Museum	June 16th
Madison Museum	June 16th
Old Faithful Museum	June 16th
Fishing Bridge Museum	June 16th

The daily hours for each museum are as follows:

Mammoth Museum	8 A.M. to 8 P.M.
Norris Museum	8 A.M. to 5 P.M.
Madison Museum	8 A.M. to 5 P.M.
Old Faithful Museum	8 A.M. to 9:30 P.M.
Fishing Bridge Museum	8 A.M. to 8 P.M.

Five outdoor amphitheaters are in use; one at Mammoth Camp Ground which will seat 200, one at Madison Junction Museum which will seat 75, one at Old Faithful Museum which will seat 300, one at West Thumb which will seat 135, and one at Fishing Bridge museum which will seat 700. These outdoor amphitheaters are used each evening to give campfire talks on natural history and history subjects.

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This season it became necessary to construct another outdoor amphitheater at the Canyon camp ground. This amphitheater has been planned and it is hoped that within another month it may be completed. Beginning with this season we had removed all Ranger Naturalist programs from the Lodges and the Hotels so that at present we have no program in any of the operators' buildings. We believe this to be an improvement, as the visitors now have a choice as to whether they will attend the Naturalist program around the campfire or a savage program in a lodge.

Further work was carried on in the Headquarters Museum in the filing of negatives and photographs, the pasting of herbarium specimens, classification and cataloging of library books, the building of a herbarium cabinet, the addition of an extra slide filing cabinet, and the addition of numerous shelves and cabinets to the storage rooms.

Accessioning of exhibit materials for the museums was also carried on.

Installation of the Firehole Canyon Field Exhibit was completed.

Editing of the Ranger Naturalist Manuals with the idea of preparing a new volume.

The study of place names of Yellowstone Park.

The placement of a Ranger Naturalist and Lookout on Mount Washburn.

The development of the pre-season activities for Ranger Naturalists and temporary Rangers, which included a trip around the loop and instructions regarding the features of the Park and duties to be performed. This year this activity proved very satisfactory.

Continuation of special service to conventions and groups of teachers and students by the Naturalist Department.

Securing motion picture camera and telephoto lens for taking wildlife pictures has facilitated this work greatly this year.

Arthur Howard has continued his research into the geology of the Tower Falls Region and the Grand Canyon of the Yellowstone.

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Cooperation with the Princeton School of Field Geology was extended.

The use of several CCC enrollees to assist in museum work and to train them in special lines of museum preparation and photography.

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NATURALIST DEPARTMENT

Activities from July 1, 1934 to June 30, 1935, inclusive

	Field Trips:		Auto Caravans			Lectures		Museum	Up. Parties	
	No.	Att.	No.	Cars	Att.	No.	Att.	Att.	No.	Att.
Canyon	274	46404	51	865	2929	148	69140		14	1270
Fishing Bridge	85	1585	66	392	1424	320	41456	55641	17	861
Madison	5	109				365	15965	29907	16	960
Mammoth	482	14036	106	1866	6312	178	18752	74303	29	1801
Mt. Washburn							18323			
Norris	281	10100						41538	3	146
Old Faithful	173	19743	86	4422	15864	214	126129	117327	59	8269
West Thumb	228	11253				69	8815		6	275
Total	1528	103230	309	7545	26329	1294	[illegible]	318716	124	13582

TOTAL CONTACTS, July 1, 1933 to June 30, 1934, inclusive 481,703

TOTAL CONTACTS, July 1, 1934 to June 30, 1935, inclusive 7[illegible]5,415

Respectfully submitted,

C. Max Bauer

Park Naturalist

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

CE OF THE SUPERINTENDENT

August 1, 1935

REPORT OF THE NATURALIST DEPARTMENT
FOR
JULY, 1935

I. CURRENT OPERATIONS:

A. Public Contact

Visitors

Throughout July the travel was from 25% to 30% above the travel of July last year. Some of the museums experienced a much greater patronage than this figure would indicate. The auto caravans and nature walks were from 50% to 100% greater than last year, with only one additional ranger naturalist. When the number of cars on a caravan exceeds 35, it is almost impossible for the ranger naturalist to handle the group properly. Similarly, when the number of people on a nature walk exceeds 85, or thereabouts, the group can not be handled adequately. A large number of the guided trips exceeded the number which could be handled by one man. Sometimes ranger naturalists handled as many as 250 on the geyser walks and other activities. These parties should be split up and more ranger naturalists should be available.

Some of the prominent visitors include the following:
Mr. Dave Madsen, Wildlife Division, N.P.S.
Mr. and Mrs. Arthur E. Demaray, Associate Director, National Park Service.
Professor Arthur T. Evans and 37 botany students from Miami University.
Professor H. A. Brauwer, Amsterdam, Holland.
Dr. Louis Vanderberge, Antwerp, Belgium
Mr. William H. Jackson, New York City
Company of First Infantry, Ft. Warren, Wyoming
Professor Mehl and 25 geology students, University of Missouri
Dr. Lawrence M. Gould and 45 students from the Utah Agricultural College, Logan, Utah
Dr. W. T. Thom and 25 geology students from the Princeton University Field School

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Mrs. C. N. Edge and son, Peter Edge from New York
Mr. Robley D. Evans, Physics Department, Massachusetts Institute of Technology
Mr. and Mrs. Clark Blickensderfer, Denver, Colorado
Mr. C. A. Graves, Arcata, California
Mr. Hannah and 150 members of the American Bar Association.
Professor Rigg and a party of botanists.

Lectures

The regular schedule of campfire lectures as indicated in the announcement was carried on throughout the month at Mammoth, Canyon, Fishing Bridge, West Thumb, Madison Junction, and Old Faithful. These campfire lectures were very well attended. Titles of the lectures have been announced in advance so that visitors can attend the lectures of their choice.

Bear lectures have been given each night at the Canyon feeding ground and at the Old Faithful feeding ground with the attendance running up to 1400 and 1500 people, actual count.

Lectures are given every two weeks to the six CCC camps in Yellowstone by members of the Park Service. These lectures are on Park policies, conservation, and natural history subjects.

B. Ranger Naturalists

We have had 19 ranger naturalists throughout the month. These have been given one day off in each 7 days. Because of the very heavy work and large numbers of people contacted, it is very important that these men receive regular relief. Two men have been assigned to relief, and Assistant Park Naturalist Crowe and Junior Park Naturalist Kearns have taken relief work three days each week. In addition, Mr. Crowe, Mr. Kearns, and the Park Naturalist have given regular lectures at campfires each week, thus keeping in close touch with contact work of the Department.

The personnel of the ranger naturalists this year is of high grade throughout.

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II. PERMANENT PROJECTS

A. Administration

In addition to the administrative work of the Department, Park Naturalist Bauer has spent a number of days with special visitors in the Park conducting them to see trumpeter swans sandhill cranes, pelicans, and special features including geological exhibits. He has also visited campfire lectures, nature walks, and all the activities possible, to properly appreciate and administer these activities.

As stated above, Assistant Park Naturalist Crowe and Junior Park Naturalist Kearns have carried on considerable relief work and aided in the supervision of the regular work of the ranger naturalists. Mr. Crowe has taken care of numerous details of supervision and supplies for the men. He was also in charge of arrangements for the three band concerts given by the Powell Band, as well as making arrangements for religious services in the Park each Sunday. He also made observations of the trumpeter swans and secured several photographs of the nest on Swan Lake.

Mr. Kearns has carried on the sales publications work which has involved a great deal of effort since our publications have been selling better than ever. He also assembled and demonstrated our newly acquired Victor Animetograph to two groups, totaling about 100 people. He also spent some time getting Kodachrome movies of natural features, birds, and animals.

B. Nature Notes

No work has been done directly on Nature Notes this month, but plans made last month call for a continuation of the history of the Nez Perce tribe and their connection with the Park region.

C. Library

Books in circulation	143
Books received during July	4
Magazines received during July	17
Pamphlets received during July	40
Magazines and pamphlets in circulation	5

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D. Museums

A large number of museum accession cards have been typed by the secretary during the month of July.

E. Equipment

Two pair of field glasses were received during the month.

F. Photographs

One CCC enrollee continues to work on photographs during the month under the supervision of Mr. Crowe.

Negatives filed.....223
Negatives in use.....69
Prints sent out..... 9
Negatives developed..... 72

G. Lantern Slides

Slides used during the month.....820
(Majority for summer lectures at the various stations)

H. Publicity Clippings

There have been a large number of clippings received during July.

I. Thermal Activity: Upper Geyser Basin by H. Lystrup

Artemisia Geyser has been playing frequently during the month of July but has not had a regular interval. It plays with a great volume of water although not to a great height.

Beehive Geyser has not been in eruption this season to our knowledge.

Bonita Pool does not function as an indicator for the Daisy Geyser. I believe the sign should be removed.

Brilliant Pool is greatly affected by play of the Daisy and its level is lowered from 12 to 24 inches after play of the Daisy Geyser.

Cliff Geyser has not been seen in eruption this season to date.

Crested Pool: A truly beautiful pool that is frequently overlooked. It has a constant overflow and has very few growing algae around it.

Castle Geyser has been playing about once daily but with an irregular interval.

Daisy Geyser plays at an average interval of 96 minutes. This geyser is always spectacular in manner of play. It still shows that on windy days the interval is increased. On one windy day this month the interval was two hours and 20 minutes.

Giantess Geyser has not been observed in eruption this season.

Giant Geyser has played three times this season, the dates being as follows: June 18th, June 30th, and again on the 25th of July. The latter eruption was an exceptionally beautiful play. It started without the slightest warning at 10:15 A.M. The day was very bright and clear and the sparts for the first four minutes attained a height of well over 300 feet. I was standing at the Daisy Geyser and just as the Daisy broke I turned in time to see the Giant lift the first spurt which was at once followed by the maximum spurt which, I judge, to have been very nearly 250 feet. There was a splendid opportunity to really appreciate the power and force of the Giant as there was not the usual amount of steam. After the first four minutes the sparts gradually became less in height, although a great amount of water was constantly being thrown out. The play was completed at 11:45 A.M.

Grand Geyser: To date this season the Grand has been playing about once every 24 hours. For several days during July it was possible to see the Grand in eruption between the hours of 4:00 and 7:30 P.M. The average number of sparts has been ten.

Handkerchief Pool: Very little remains of this once famous pool. It has an opening of about 8 inches in diameter and has very little water left in it.

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Jewel Geyser: The featuring of this as the Bombergmief Geyser has been discussed with, but the intervening manner of play still furnishes the visitor with a real thrill. The interval is very nearly 5 minutes.

Lion Geyser plays frequently although without a regular interval.

Riverside Geyser: The interval for the month of July has been shortened a little so that now the average interval is about 8 hours.

Old Faithful Geyser still the attraction and main interest of the visitor. The average interval is about 65 minutes.

Rainbow Pool has not been observed in eruption during the month of July.

Sapphire Pool: The walk has been extended making it possible to bring large parties of people directly to it without the former danger. The interval of this pool, which is really a geyser, has been found to be 12 minutes.

I believe that the Geyser and Hot Spring activity this season has not diminished as some have been made to believe. Certainly the activity is very nearly the same as in 1930-31-32-33-and 34.

Mammoth Hot Springs by Howard Fischer

Angel Spring: The south outlet has shown considerable fluctuation during the month usually without much change in color. On July 30 or 31 the flow from this outlet nearly ceased and most of the color disappeared. The other outlets show no change.

Baby Spring: There has been no water from the vent in the top of the cone since last of June and no color. Rather small but strong flow of water at a temperature of 102° F. from several small vents northwest of the main cone. Some yellow color around their openings.

Cleopatra Spring: No apparent change this month.

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Cupid's Cone: During the last few days of the month several new flows have developed above and to the west of Cupid's Cone. The water issues from some of these with a pulsating flow, similar to the flow from Cleopatra Spring. Up to the present the only color is the yellow of bacteria. The overflow is collecting in a basin at the base of the slope below Cupid's Cone. The maximum temperature is 162° F.

Miniature Springs on the trail below Cleopatra have continued without much change.

Hymen Spring shows no apparent change this month.

Jupiter Spring is inactive. Blue Spring is variable, rather quiet most of the time but occasionally bubbling vigorously and flowing quite strongly into a basin to the south and more steadily toward the north. The last few days some water has been flowing over the front of Jupiter Terrace; 2 or 3 feet wide, but no colors are seen yet.

Main Terrace: There are several small seeps along a long crack along the top of Main Terrace; evidence of intermittent activity all along the top. A strong bubbling and flow of water can be heard in this crack.

Minerva Spring: a decided flow has developed during the past two weeks on the main level of Minerva Terrace. This has formed a large hot pool on this level and the overflow is collecting in a lower basin to the southeast. A small flow to the west and to the northeast. Very slight traces of color have developed on the top of the terrace. The highest temperature observed was 142° F.

Mound Spring: The small springs on top continue to flow, providing patches of color to each side of Mound Terrace.

Naiad Terrace: In addition to a small seep of color which has been seen on the face of Naiad during the past month, a hot flow has developed on the top of this terrace. As yet, no color is present nor does the overflow extend far down the face.

Narrow Gauge: The only activity along the crevice in the top of the Terrace is some escaping steam and a bubbling noise--no water escaping.

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New Spring, near the road on Main Terrace has been flowing with increased strength since the last of June, again forming a beautiful cascade over the white deposits of the channel deserted last month. This new overflow has reached a point some 90 feet below Minerva Terrace. Definite light colors have developed around the two springs and on the level below, but where the water is flowing most rapidly very little algae coloring is yet apparent. Both vents appear to be flowing now at a temperature of 150° F.

In the fissure in the terrace immediately above the New Spring, water has continued to flow to within 1½ feet of the top with some overflow from the creek to the north. Temperature of the water is 156° F.

New Spring below Highland shows no change. The rumbling of water below the ground nearby can now be heard very distinctly.

New Spring below Cleopatra Mound which developed between July 15 and July 20 was first seen by Assistant Park Naturalist George Crowe. At that time no color was present. At the end of the month definite yellow color had developed around the vent. There is a strong flow of water and a bubbling escape of gas. Temperature: 151° F.

Palette Spring has continued to increase in flow during the month. The increase has been rather gradual, but is definitely noticeable to the west of Devil's Thumb where new areas are being covered, and to the east as well. The temperature observed near the second longest vent was 158° F.

Pulpit Terrace: A strong flow and beautiful color appears between Pulpit Terrace and Mound Terrace. A considerable area is colored a deep orange between Pulpit and Jupiter Terrace. There are four springs below Pulpit Terrace near the house.

Opal Spring: The flow has been constant all month.

Orange Spring Mound: The principle flow continues to be on the northwest side, but there is a definite flow to the southeast as well. There is evidence of a stronger flow recently from the lower cone east of Orange Spring Mound.

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YELLOWSTONE PARK, WYO.

J. Personnel

Park Naturalist Bauer was on duty all month.
Assistant Park Naturalist Crowe was on duty all month.
Junior Park Naturalist Reserve was on duty all month.
Temporary clerk-stenographer Miss Harris was on duty all month.

CCC enrollee, Herbert Aldridge, worked all month, primarily on photograph files.

James Johnson and Lawrence Goebel, student enrollees of the CCC, arrived the first part of the month and have been studying geological problems in the vicinity of Mammoth. Both men have made very satisfactory progress.

Following is a list of the ranger naturalists and the time of service:

Herbert Lystrup, entire month
Arthur Nash, entire month
Philip Fix, entire month
Robert Fowler, entire month
Lloyd Sweetman, entire month
Neil Minor, entire month
Howard Stagner, entire month
E. T. Bodenberg, entire month
R. J. Preston, entire month
A. T. Whisenore, entire month
W. Verde Watson, entire month
H. E. Stork, entire month
Myron Griswold, entire month
Jennings King, entire month
Harry Woodward, entire month
Trueten E. Peery, entire month
Willis Smith, entire month
Charles Hutchins, July 3 to the end of the month.
Theodore Robb, July 1 to the end of the month.

Laborers employed to care for the museums and the museum grounds included the following:

Clyde Stewart, entire month
Ross Ingersoll, entire month

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Walter Hamilton worked one day, July 2.
Cliff Crowell from July 3 to July 6. He also worked on July 8th.

Respectfully submitted,

C. Max Bauer
Park Naturalist

CMB:CH
cc Director
Dr. Bumpus
Mr. Hall
Museum

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Misc. Includes: Game Stalk
Artist Point
Grand View
Museum Talks

SUMMARY OF NATURALIST ACTIVITIES

Yellowstone National Park

For month ending July 31, 1935

Place	Field Trips: No.	Field Trips: Attendance	Auto Caravans: No.	Auto Caravans: No. Cars	Auto Caravans: Attendance	Lectures: No.	Lectures: Attendance	Special Parties: No.	Special Parties: Attendance	Museum: Attendance	Misc. Contacts: No.	Totals: Contacts Made	Publications Distributed: No.	Publications Distributed: $ Sales
Canyon	62	2178				62	30010	5	921		30777	63,886		
Fishing Bridge	31	1697	31	589	2239	31	21290	7	1509	23255	331	50,321		$ 852.25
Madison						161	7156	18	725	19480		27,361		
Mammoth	62	7809	31	637	1754	31	6963	10	434	37223	2289	56,474		1063.40
Mount Washburn											8056	8,056		
Norris	142	5537								22192		27,729		
Old Faithful	62	7574	31	1324	4386	62	68625	30	2348	51766	778	135,477		1124.40
West Thumb	94	7219				31	3891					11,110		
Totals 1935	455	32014	93	2550	8379	378	137935	70	5937	153918	42231	380,414		3040.05
Totals 1934	584	44871	129	3603	12560	526	130338	62	6834	127164		321,767		1659.30

Park Visitors During Period: 115,786

Signed: Olaus Bauer
Park Naturalist

DEPARTMENT OF THE INTERIOR

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YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

FICE OF THE SUPERINTENDENT

September 1, 1935

REPORT OF THE NATURALIST DEPARTMENT
FOR
AUGUST, 1935

I. CURRENT OPERATIONS

A. Public Contact

Visitors

The travel in August exceeded that of July and was greater than any previous month on record. There have been a large number of visitors of all classes. Among those who are well-known are:

Professor Jean Piccard and family of stratosphere fame
Dr. John T. Rouse of Hamilton College
Professor George E. Mayfield, Vanderbilt University
Dr. H. A. Brouwer, Amsterdam, Holland
Mrs. Isabel F. Hart and 25 teachers from Oswego, New York, on a Geology Tour
Mr. Clarence Michalis and family of New York
Superintendent Guy D. Edwards and wife of Grand Teton National Park
Mrs. Frances Dean, special writer, Washington Office
Stanley High, national radio broadcaster, and wife
College of the Pacific Geology Tour, Stockton, Calif.
David Mitchell, former employee of Yellowstone Park, who is now lecturing on National Parks.

Lectures

Campfire lectures were given each night during the month at Mammoth, Canyon, Fishing Bridge, West Thumb, Madison Junction, and Old Faithful. The plan of each lecture is to have about 10 or 12 minutes of community singing, with possibly during this time, someone of the audience giving a solo or special selection. These special numbers are always investigated by the Ranger Naturalist in advance so that he knows exactly what it amounts to. This part of the program is not supposed to last over 15 minutes at the most. Then 5 or 6 minutes are used in

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making announcements of ranger naturalist activities and administrative information. The speaker of the evening is then introduced in a very brief but dignified manner. The Ranger Naturalist then speaks on some phase of natural history or history for 30 or 35 minutes. Wherever possible these lectures are illustrated by lantern slides or in a few instances with movie film. However, it is our idea never to use movie film throughout the lecture period, but only for a small portion thereof, perhaps not more than 10 or 12 minutes.

It is believed that the visitors get more from the personal contact with the Ranger Naturalist, and it is that part of the program in which they are most interested and which they come to hear when they come to a campfire program. Also it is that personal contact with the Ranger Naturalists which gives the visitors a better understanding of the Park and a keener appreciation of nature and Park features.

The bear lectures were continued throughout August at the Canyon and Old Faithful feeding grounds. The attendance at each one of these places ranged from 800 to 1500 persons per night.

Lectures were given by Park Service employees at the six CCC camps on August 2, 16, and 30, as follows:

August 2, 1935

Gallatin Camp - Mr. Nash - 138 present - well received
Mammoth Camp - Mr. Wagner - 300 present - very attentive
Canyon Camp - Mr. Fix failed to appear
Lake Camp - Mr. Sweetman - 300 present - well received
Nez Perce Camp - Mr. Peery - 180 present - well received
Snake River Camp - Mr. Woodward - 80 present - well received

August 16, 1935

Gallatin Camp - Mr. Evans - No talk given, boys all out on fire duty
Mammoth Camp - Dr. Bauer - 150 present half of them being residents of Mammoth
Canyon Camp - Mr. Hundley - Only 20 there, rest out on fire duty - didn't know there was to be a talk

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Lake Camp - Mr. Hart - No talk given; all except 30 boys were out on fire duty
Nez Perce Camp - Mr. Peery - Postponed because of fire
Snake River Camp - Mr. Garry - 90 present - very well received

August 30, 1935

Gallatin Camp - Mr. Chapman - Postponed until next week as the 30th was their recreation night
Mammoth Camp - Mr. Barrows - Not given
Canyon Camp - Mr. Joffe - Not given
Lake Camp - Mr. Kearns - No talk given; boys did not assemble
Nez Perce Camp - Mr. King - Called off by Camp Doctor
Snake River Camp - Mr. Reese - 76 present - well received

B. Ranger Naturalists

There were 19 ranger naturalists on duty during the month, although some did not work the entire month. The list is given under the heading of Personnel. It is hoped that next year five or six additional ranger naturalists may be added to the staff during the heavy part of the season, so that large auto caravans and large guide walks may be divided into smaller groups. The effectiveness of the work is not what it should be when a ranger naturalist must take more people on a walk than can possibly hear him under the most favorable conditions. Many times during the month some of the guide parties contained more than 300 persons.

II. PERMANENT PROJECTS

A. Administration

Park Naturalist Bauer carried on the administrative work of the Department keeping in close touch with the field work throughout the month visiting lectures, walks, and other activities and taking part in many of these. In addition, the handling of a certain amount of correspondence and routine work in the office made the month a very busy one. Several eminent geologists visited the Park and the Park Naturalist assisted them in carrying on minor investigations.

Dr. Roy A. Wilson, Junior Geologist, CCC, was in the Park from August 8 to the end of the month. During the first two weeks, he

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was occupied in seeing the Park and becoming familiar with some of its geology through study of the literature and trips into the field. It is hoped that he may be assigned to definite problems in the Park that will lead to some definite contribution to the geology here.

Assistant Park Naturalist Crowe has carried on relief work three days each week besides taking care of numerous details of supervision and supplies for the stations. He has made arrangements for religious services which have been held in the Park at the Old Faithful and Fishing Bridge amphitheatres each Sunday afternoon at 4 o'clock. In addition, Mr. Crowe assisted in directing Mrs. Frances Dean through the Park. He also assisted Mrs. George Beagley with work on the herbarium and Mr. Albright in working on the butterfly collection. He also spent some time on preliminary arrangements for the Federal Employees Convention.

Junior Park Naturalist Kearns has carried on relief work two days each week at Mammoth and one day every other week on Mt. Washburn. Mr. Kearns and Mr. Crowe have alternated on giving the bear lecture each Saturday night at the Old Faithful and Canyon Feeding Grounds. On August 7, Mr. Kearns conducted an all-day hike to Electric Peak and return. There were 19 in the party, 15 men and 4 women. The climb was made from the north after traveling by car to Aldridge, Montana. On August 12, he met Chief White Hawk and Chief Many Wounds, Nez Perce Indians, accompanied by Messrs. L. V. McWhorter and Kopec. They went to the site of the old Nez Perce camp on Nez Perce Creek. On the afternoon of August 13, they visited the old Baronett Bridge site on the Yellowstone near the mouth of the Lamar River. Much interesting information was obtained from the Indians in connection with the retreat of the Nez Perces through Yellowstone Park in 1877. Mr. Kearns also handled the sales publications and correspondence relating to the same.

B. Nature Notes

Some work was done by Junior Naturalist Kearns on the preparation and material of the next issue of Nature Notes, and some notes were received from the Ranger Naturalists.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

SIDE OF THE SUPERINTENDENT

C. Library

Books in circulation.....	112
Books received during August.....	1
Magazines received during August.....	10
Pamphlets received during August.....	51
Magazines & pamphlets in circulation..	16

D. Museums

Some collecting of butterflies was done by three boy scouts who also prepared a preliminary exhibit for the Norris Museum and installed same in one of the cases there.

Considerable work has been done this month on the typing of Museum accession cards.

E. Equipment

No new equipment has been received during the month of August.

F. Photographs

Herbert Aldridge, a CCC enrollee has continued his work this month on photographs. James Johnson, a CCC student enrollee, has also spent some time on photographs.

Negatives filed.....	125
Negatives in use.....	67
Prints sent out.....	37
Negatives developed.....	60

G. Lantern Slides

Slides used during the month..... 800
(Majority for summer lectures at the various stations.)

H. Publicity Clippings

A large number of clippings have been received during August.

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OFFICE OF THE SUPERINTENDENT

10306-1 - Kearns

Chief White Hawk and Chief Many Wounds, Nez Perce Indians who visited Yellowstone Park, August 12 and 13. Chief White Hawk was with the Nez Perce band that retreated through Yellowstone in 1877. This picture was taken on the east abutment of the old Baronett bridge. The remains of Baronett's old cabin may be seen along the stream bed to the right of Chief Many Wounds.

Naturalist Party on top of Electric Peak, August 7, 1935. Nineteen people, 15 men and 4 women, successfully negotiated this climb under the leadership of Junior Naturalist Kearns.

RONO
1935 Aug
P-7

I. Thermal Activity: Upper Geyser Basin by R. Lystrup

Artemisia Geyser has been more active during the latter part of the season than earlier in the season. It has no regular interval but plays frequently and with a great volume of water. The play has been observed at times to last as long as 30 minutes.

Beehive Geyser. The play of this geyser was observed by Ranger Replogle at 9:15 p.m. The height was well over 150 feet and the play continued for about 5 minutes.

Bonita Pool does not function as an indicator for Daisy Geyser.

Castle Geyser has been playing during the entire season of 1938 about once daily with no regular interval. It has an unusually long period of steam play after the eruption.

Cliff Geyser has not been observed in eruption this season to date.

Daisy Geyser has been very regular in play this season, about every 90 minutes. It still maintains its popularity as one of the most interesting geysers in the basin.

Fan and Mortar Geysers have been very active during July and August. The heights have varied from 40 to 60 feet and the duration of play has usually been about 15 minutes.

Giantess Geyser has not been observed in eruption during the entire season.

Giant Geyser has played five times to date, as follows:

June 18 at 5:15 p.m.
June 29 at 1:15 p.m.
July 25 at 10:15 a.m.
August 10 at 4:45 p.m.
August 20 at 11:20 p.m.

Each time the height was estimated at well over 250 feet. The duration of play was about two hours.

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Grand Geyser: Play as recorded this season:
Shortest interval - between 14 and 15 hours
Longest interval - 36 hours
Average interval - 24 hours
Greatest number of spurts - 14
Least number of spurts - 4
Duration of play - 30 to 40 minutes

Handkerchief Pool is practically extinct. Only a small opening remains with a few inches of water in the very bottom.

Jewel Geyser. The average interval for the season has been 5 minutes. The height varies between 30 and 40 feet. This geyser is no longer featured as a handkerchief geyser because of the danger involved.

Lion Geyser has been observed frequently in eruption. Two days eruptions are listed below:

August 25th	August 27th
10:00 a.m.	8:00 a.m.
10:55 a.m.	9:15 a.m.
1:30 p.m.	11:00 a.m.

The height varies between 30 and 40 feet and duration of play is about 10 minutes.

Rainbow Pool still remains active as a geyser although it plays very irregularly.

Riverside Geyser has been playing at an average interval of 8½ hours during this past season. Duration of play has been about 20 minutes and the height about 40 to 65 feet.

Sawmill Geyser was seldom observed in eruption during the early part of the season. For the past month we have observed a great increase in activity. Griswold has observed it almost daily for the past month and notes that it plays about one third of the time. It plays long and frequently. Definite tremors are noticed during the eruption.

Sapphire Pool. Eruptions occur every 12 minutes. The duration of play is 2 minutes and the heights vary from 4 to 10 feet.

Solitary Geyser plays about every 4 or 5 minutes to heights varying from 15 to 20 feet. Duration of play about 1½ minutes.

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Splendid Geyser has not been observed in eruption this season.

Turban Geyser: Average intervals 20 minutes
Height - 4 feet
Duration - 5 minutes
The side vent has not been observed in play except during play of the Grand or just after play of the Grand.

Whistle Geyser has not been observed in eruption during this past season.

Grotto Geyser plays frequently although with no regular interval. This geyser continues to create a great deal of interest for the visitors because of the odd cone structure.

Geyser activity for the season of 1935 as compared with last year's reports, indicates greater activity for 1935. Many reports have been passed about to the effect that the geysers are dying out. This season's activities certainly declare just the opposite.

Norris Geyser Basin by Verde Watson

August 4. Whatever is the cause of it all, one fact is certain, that there is much less water at the surface here at Norris than early in the season. Since the last of July there has been a steady decline in most of the springs. Today I note that both Onyx and Iris Springs have gone down so far that the vent is barely covered and the steam pressure is throwing the small amount of water much higher than usual. It seems likely that they will degenerate into steam vents as they did last year. Palpitator Spring, in the southern part of the basin, has been going lower and lower lately, and today I notice that it has lost all of its water; there is nothing but steam coming from it now. Corporal Spring, the large superheated one shortly north and west of Palpitator, has gone down at least a foot and is boiling very violently. Emerald Spring has ceased to overflow, as has the old Monarch Crater.

August 7. There are indications now that the water supply is being restored, as in many of the vents the water level is considerably higher. Emerald and Monarch are both overflowing again and the Palpitator has some water again, tho it does not palpitate. There is at least six inches more water in Hurricane Vent

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today. Have noted a decided increase in the amount of water in the large muddy spring north of Morningside at various times, and have thought its water supply must be changing a lot. Have found out, however, that the small geyser (we call it Bruce Geyser) shortly to the northwest is erupting again and dumping its water into this large muddy spring. I find that this little geyser erupts at a height of 20 feet part of the time and the total eruption may be as long as 2 or 3 hours - usually toward the end of the eruption the water becomes murky.

August 8th. I notice today that Fan Geyser is full of water again and the water is clear. I have an idea that it is done for the summer.

August 9th. Onyx and Iris Springs are filling up again--they are both back to normal again. The small sulphur pot shortly northwest of Onyx is nearly full also. Fan seems to have shut down entirely, as we saw no eruptions yesterday and none today - it is not even bubbling now. This geyser interests me. Since it has ceased to erupt now that the water supply seems to be increasing, I am wondering if it may not now have too much water for an eruption. Its actions would lead one to believe that some such condition might exist. It only erupted once previous to July 18. Its water level began to go down about that time, and on the 20 we saw several eruptions. After that day we saw at least one eruption every day and sometimes two or three until the increase of water began to be noted. Since its vent has again been filled with water, we have seen no eruptions. Is it possible that the total length of the water column is too much for it to lift out?

August 13th. Have noticed lately that Whirligig is performing differently again. For about a month now it has been erupting at about half hour intervals and lasting for nearly that long. Yesterday and today it has been about an hour between eruptions and they last only from seven to ten minutes. It fills up now and stands almost full of water for quite a time before the eruption, and when the play is over the water does not all leave the crater as it did formerly. I took a large amount of debris from the crater of this geyser today - mostly flakes of rock from basin around its top. It, like many other vents here, should have a railing around it to keep

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people from getting so close to it. In fact, I am coming more and more to the conclusion that all geyser basins should be withdrawn from the visitors as areas through which they may roam unguided. I think that all such areas should be traversed by the public only when accompanied by a ranger, partly for protection of the people, but mostly for the protection of the geysers and hot springs. If vandalism is allowed to go on unchecked to the extent we notice it here this year, it will not be long until some of our most interesting vents will have passed into oblivion.

August 14th. Valentine erupted today. This is the first eruption we have seen from this vent since the 21 of July, and I think it is the first eruption of any size since that time as the stick placed across its vent was not moved until today. The eruption today was not very powerful - the water was not thrown more than 30 feet into the air. I am hopeful, however, that this feeble eruption may indicate the revival of the vent and that normal eruptions may soon be seen again.

August 16th. The large vent 100 feet west of Ledge Geyser is throwing out quite a large amount of water at intervals of a few minutes. Often the water is thrown clear out onto the ground on the north side. This vent, which to my knowledge, has been practically dead for several years, showed some signs of revival early in the season - was throwing out enough water to kill the grass and sedges around its top - but when the rest showed signs of decline it also became much less active. It is a regular geyser at times now.

August 17th. I noticed today that the Devil's Bath Tub is at least half full of water again and steaming very violently. Much water is being thrown out into the Valentine drainage. The little steam and water vent southeast of Valentine was quite active about the middle of the morning, and at noon Valentine erupted. I have always regarded this small vent as related to Valentine. The eruption of Valentine was not very high, not over 30 feet.

August 20th. After a vacation of a month, Constant played again today. It was not a very high eruption, but even so we are glad to see it. Constant played once at 9:30 this morning and again about the middle of the afternoon. It would be fine if it would get back on a regular schedule of normal eruptions.

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August 26th. I was very much surprised to find this morning that the little steam vent close beside the north-south walk is now entirely inactive. Not only is it inactive, but now in place of violently expelling large amounts of steam, the water which ordinarily flows over the top of it from vents further up is flowing into it. Because of the large amount of water thrown in a shower across the walk this vent has always been more or less of a nuisance, but it has always been very interesting to the visitors because it surprises them. It being a steam vent, they expect the shower to be hot and upon finding it cold they demand an explanation. Having but very little water of its own it is cooled almost instantly on contact with the air because very finely divided by the great steam pressure - the water flowing over it is of course already cold.

I have noticed lately that the little geyser a few feet south of Whirligig is erupting with considerable regularity. Before the changes of late July this geyser usually erupted about the time the Whirligig was finishing up. During the three or four weeks of slackened activity itdid not play at all. Now it is at it again and it does not always wait for Whirligig to play before it puts on its series of eruptions. I timed it a few days ago and found that it was erupting four times a minute to a height of from 10 to 15 feet and that the series of eruptions lasted as long as an hour. Late today we saw it going vigorously for more than an hour.

August 27th. I made a special trip into the southern part of the basin today to see what changes might have taken place there. I found most things performing in about the same manner as observed on the last trip, but did note a few changes. The Palpitator is full of water now and palpitating normally. Corporal Spring is also full. Veteran Geyser had no water in it, which seems a little unusual, as I have never seen it that way before. However, it may have just finished an eruption and the water that was left had gone back down into the vent. There seems to be no water shortage in this southern part of the Norris Basin at the present time.

August 28th. Apparently there is no shortage of water in the northern part of the basin, as I found on the trip there this morning that all vents are full and performing in about the same manner as noted early in the season. There is considerably more water standing on the "Emerald Springs Plain" than there was a month ago.

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The Devil's Bath Tub has no water in it today, that is, there is none in the basin itself, but the steam vent is throwing out quite a bit.

The longer I stay around this basin, the more fearful I am of making a definite statement concerning the activity of these vents. In fact, I have gotten to where I am almost certain to refuse to do so, as they change so rapidly that I cannot keep up with them.

Mammoth Hot Springs by George Crowe

Angel Spring almost ceased flowing early in the month.

Baby Spring has shown no change this month.

Blue Spring is again filling basins to the south.

Cleopatra Spring has decreased in flow during august.

Cupid's Cove. The new flow has continued through the month.

Miniature Springs on the trail below Cleopatra continue to flow as in July.

Hymen Spring ceased flowing on August 3 and is still inactive.

Jupiter Spring is inactive but the overflow from Blue Springs to the east is flowing over the old slope of Jupiter Terrace in two places.

Main Terrace. The small seeps are still active along the top of the terrace with the greatest activity at the east end.

Minerva Spring has increased in flow during the month with water overflowing from two pools to the southeast, - east and north. The color is increasing.

Mound Spring shows no change.

Naiad Terrace - two outlets have developed, in addition to the flow reported in July. More of the east slope is now colored.

Narrow Gauge shows no change.

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New Spring continues as in July.

Hen Spring below Highland shows no change.

Hen Spring below Chance Mound shows no change.

Palette Spring is increasing its flow to the west as the new basins on the east are built up with travertine.

Opal Spring is depositing travertine at a rapid rate on its terraces. The coloring is very beautiful this month.

Orange Spring Mound shows no change.

J. Personnel

Park Naturalist Bauer was on duty all month.
Assistant Park Naturalist Crowe was on duty all month.
Junior Park Naturalist Kearns was on duty all month.
Temporary clerk-stenographer, Miss Harris, was on duty all month.
CCC enrollee, Herbert Aldridge, assigned to the Museum was engaged all month on photographic files and developing of negatives and printing of pictures.
James Johnson and Lawrence Goebel, student enrollees of CCC, continued their study of geological problems in the vicinity of Mammoth. Mr. Johnson, who has a M.A. in Geology from the University of Colorado, is an expert photographer and has taken many very fine pictures for the Naturalist Department.

The Ranger Naturalists employed during the month are as follows:

Arthur Nash, entire month
Philip Fix, entire month
Robert Fowler, entire month
Neil Miner, entire month
Howard Stagner, entire month
H. T. Bodenberg, entire month
Richard J. Preston, entire month
Allen Whisenore, entire month
W. Verde Watson, entire month

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H. E. Stork, entire month
Myron Griswold, entire month
Harry Woodward, entire month
Truston Peery, entire month
Willis Smith, entire month
Charles Hutchins, entire month
Theodore Robb, entire month
Lloyd Sweetman, to and including August 21.
Jennings King, to and including August 24
Herbert Lyetrup, to and including August 29

The laborers employed to care for the Museums and the Museum grounds were:

Clyde Stewart, Mammoth, entire month
Rose Ingersoll, Fishing Bridge, entire month

Dr. Roy A. Wilson, Junior Geologist, [illegible], was in the [illegible] from August 8 to the end of the month.

Respectfully submitted,

C. Max Bauer
Park Naturalist

CMB:ch
CC Director
Dr. Bumpus
Mr. Hall
Museum

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Misc. Includes: Mt. Washburn
Game Stalk
Museum Talks
Artist Point
Grand View

SUMMARY OF NATURALIST ACTIVITIES

Yellowstone National Park

For month ending August 31, 1935

Place	Field Trips: No.	Field Trips: Attendance	Auto Caravans: No.	Auto Caravans: No. Cars	Auto Caravans: Attendance	Lectures: No.	Lectures: Attendance	Special Parties: No.	Special Parties: Attendance	Museum Attendance	Misc. Contacts No.	Totals Contacts Made	Publications Distributed: No.	Publications Distributed: $ Sales
Canyon	62	1743				62	26976				29617	58,336		
Fishing Bridge	31	1293	31	441	2036	31	18888	4	118	24924	557	47,816		$ 805.50
Madison						160	6525	12	387	19118		26,030		
Mammoth	62	7839	31	694	2219	31	7882	5	589	40095	2759	61,383		1544.05
Mount Washburn											12141	12,141		
Norris	140	5061								21480		26,541		
Old Faithful	62	7157	31	1446	4538	62	68386	10	1317	75786		157,184		974.70
West Thumb	85	6495				29	3644					10,139		
Totals 1935	442	29588	93	2581	8793	375	132301	31	2411	181403	45074	399,570		$ 3124.25
Totals 1934	593	47464	118	3104	10899	484	119868	47	6256	124144		308,630		$ 1798.50

Park Visitors During Period: 114,677

Signed: Omax Bauer

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E OF THE SUPERINTENDENT

October 1, 1935

REPORT OF THE SUPERINTENDENT

TO

DIRECTOR, 1935

I. CURRENT OPERATIONS

A. Public Contact

Visitors

There was continued increased travel through September which brought the figures up to an unprecedented travel for the season. By September 30 the travel passed the 518,000 mark. Among those who visited the Park were the following:

Dr. Harold C. Bryant, Assistant Director, National Park Service.
Director Arno B. Cammerer.
Senator Wagner of New York.
Senator Carey of Wyoming.
Senator McCarren of Nevada.
President Mitchell of the Civil Service Commission.
Mr. Carroll H. Wegemann, Regional Geologist, NPS.
Mr. Norman W. Scherer, former Acting Park Naturalist of Yellowstone, now with the U. S. Indian Service, Minneapolis, Minnesota.
Mr. Cable, Auditor of the National Park Service.
Dr. and Mrs. Frank H. Oastler.
Dr. Siegfred Von Cirimey, Bonn, Germany.
Dr. and Mrs. Sheppard of Columbus, Ohio.

The National Federation of Federal Employees met at Old Faithful from September 2 to September 6 inclusive, there being about 400 present. Numerous prominent officials from all parts of the United States were present, among them being the following National officers:

President Luther C. Steward
Secretary-Treasurer Gertrude M. McNally
Vice-President Chrey J. Miller
Vice-President Walter G. Taylor
Vice-President Charles L. Siegmund

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The P.E.O. Sisterhood National Convention met at Old Faithful from September 10 to September 13. The delegates together with their families brought a total of about 1700 visitors to the Park during this period.

Lectures

Campfire lectures were given by ranger naturalists until the close of the season, and the stations were closed as indicated under "Museums". Bear lectures were continued at Old Faithful until September 16 and at Canyon until the 20th. Lectures by Park Service employees in the CCC camps were discontinued during September. These lectures were discontinued because of the lack of interest of the men in charge of the camps, the educational advisors, and to a certain extent of the boys themselves. However, it is believed that if complete cooperation had been obtained from the various camps at the close of the season, there would have been much larger attendance at the lectures furnished by the Park Service employees.

B. Ranger Naturalists

There were 14 ranger naturalists on duty during a part or all of the month. The actual time of service is given in the personnel list at the end of this report. Owing to a reduced personnel which is necessary because of lack of funds, some of the activities were discontinued as follows: the game stalking caravan at Canyon was discontinued on September 5; at Mammoth on September 5. The auto caravan at Fishing Bridge was discontinued on September 8, and various other activities were cut down as the men left the service until the close of the season, which came officially on September 16. Religious services were carried on throughout the summer at the Fishing Bridge and Old Faithful amphitheaters at 4:00 p.m. each Sunday afternoon. These were discontinued on September 8.

II. PERMANENT PROJECTS

A. Administration

Park Naturalist Bauer carried on the administrative work

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of the Department during the month. Assistant Director Bryant was met at Billings, Montana and escorted to the Park over the new Red Lodge-Cooke highway by the Park Naturalist on September 7. He remained in the Park on the 8, 9, 10, and on the 11 the Park Naturalist took him to Cody to catch a train there for Rocky Mountain Park. During his visit, Assistant Park Naturalist Crowe and Junior Park Naturalist Kearns each spent a day with him visiting important points and projects. The Park Naturalist took several field trips during the month--one on September 15 and 16 in company with Superintendent Tell and Chief Ranger LaHoue, on which the party went to Cooke, obtained saddle horses, and took the trip to Grasshopper Glacier in the Pear Tooth Mountain Range, about 15 miles north of Cooke. On September 20, the Park Naturalist accompanied Dr. Dattler to Grebe Lake and to the last bear feeding of the season at Canyon. On this trip many animals were seen. Other incidental trips on the loop were very interesting because of the large number of animals seen. Most any day bison, antelope, deer, elk, coyotes, moose, ducks, geese, and swans may be seen from the main road at this time of the year. The Park Naturalist also spent a day with Dr. Von Ciriacy in showing him forest conditions and wildlife in the Park.

Assistant Park Naturalist Crowe spent several days with the National Federation of Federal Employees Convention and the P. E. C. Sisterhood Convention. During the latter part of the month, he was busy packing and storing equipment and closing the museums for the winter. Mounted specimens were fumigated and carefully covered, and many small tasks in preparation for winter were completed. In association with Ranger Naturalist Hall Miner, some repair work was done on birds, flower seeds scattered at some of the wayside exhibits, and specimens of one marten, one porcupine, and two boxes of butterflies prepared by Mr. Miner were turned in to the museums. Mr. Miner remained several days after the regular closing of the season and was especially helpful in this work.

Junior Park Naturalist Kearns was occupied in carrying on the work of sales publications and gave several lectures during the early part of the month. From September 15 to

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the close of the month Mr. Learns has been assisting Superintendent Toll in the Main Office.

Dr. Roy A. Wilson, Junior Geologist, NPS, prepared a report on a new trail to Electric Peak.

B. Nature Notes

No work was done on Nature Notes because of the press of other affairs. The next issue will be a continuation of the Nez Perce Indian history and also the beginning of a diary by Lieutenant Doane of the winter trip through Yellowstone in 1876, which has never been published previously. It is hoped that this issue can be put out soon. The publication has been postponed because Mr. Learns' duties in the Headquarters Office have required his full time during the last two weeks of the month.

C. Library

Books in circulation	93
Books received during September	14
Magazines and pamphlets in circulation	23
Magazines received during September	36
Pamphlets received during September	84

D. Museums

One marten skin, one porcupine skin, and two boxes of butterflies collected by Mr. Crowe and prepared by Mr. Knox have been contributed to the Museum.

The closing dates of the museums were as follows:

Madison Museum, September 2
Norris Museum, September 7
Fishing Bridge and Old Faithful Museums, Sept. 15
Mammoth Museum, September 20

E. Equipment

An electric rotary converter and one movie camera filter were received during the month.

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F. Photographs

Negatives filed.....	40
Negatives in use.....	77
Prints sent out.....	0
Negatives developed.....	45

G. Lantern Slides

Slides used during the month..... 885

H. Publicity Clippings

Thirty five passages of newspaper clippings were received during the month of September.

I. Thermal Activity - Upper Basin

The Giant Geyser has been erupting throughout the summer season about every two weeks, and this month the Giantess Geyser, which has not been reported for several years, began eruption at 11:00 p.m. Sunday, September 22, and continued to erupt at 30 minute intervals until 5:00 o'clock Tuesday morning, September 24. During this period of 30 hours it threw out an enormous quantity of water. The first eruption was taken from the station but not seen. However, about the second or third time it erupted its height was over 200 feet and a great quantity of water was seen issuing from the crater into the Firehole River. As far as quantity of water is concerned, this geyser seems to be the largest in the Park at the present time. On Sunday, September 29, the Fan Geyser and its neighbor, The Mortar, erupted at about 8:00 p.m. much greater than usual thereby, water completely across the recently built road and bridge across the Firehole River. During the month Rainbow Pool in the Black Sand Basin has become much better and erupts every 15 or 20 minutes to a height of from 15 to 30 feet. It is possible that this pool is gradually becoming a geyser.

Mammoth Hot Springs by Geo. Crowe

Angel Spring is still flowing slightly at the main outlet and also a little to the south.

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Baby Spring is flowing from three small outlets, about one quarter the flow of last spring. The water all disappears in a new sink-hole about four feet from the outlets.

Budd's Cave. This spring has increased in flow during the month.

Hymen Spring is still inactive.

Jupiter Terrace - no change.

Minerva Spring continues flowing with one large pool filled.

Mud Spring shows no change in flow during the month.

Opal Spring has increased in flow this month and has deposited travertine more rapidly than the other springs.

Orange Spring Mound shows a slight increase in activity on the formation.

Palette Spring continues the heavy flow which was noticeable during July and August, a portion of which has shifted to the west side of Devil's Thumb. The overflow reaches the lower basins of Hymen Terrace.

Pinyon Terrace shows new activity with a slight flow of water above Stygian Cave.

Pulpit Terrace was partially covered by water for a time during the month.

White Elephant Back Terrace - no change.

New Activity. - The new spring and pool near Main Terrace maintains the steady flow of the summer. The water in the large crack twenty feet up the slope from the pool is now within 10 inches of the top. The overflow from the north end of the crack is building deposits of travertine.

The new spring near Sheep Mound is flowing the same as last month, but another new spring has broken out 60 feet to the south near the road.

The spring below Highland shows no change from August.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

J. Personnel

The Park Naturalist was on duty all month except one day of annual leave on September 17.

Assistant Park Naturalist Crowe was on duty all month except one-half day of annual leave on September 27.

Junior Park Naturalist Emerson was on duty all month except one-fourth day of annual leave on September 25.

Temporary clerk-stenographer Miss Harris was on duty all month.

CCC enrollee, Herbert Aldridge, was transferred from Museum duty during the first week in September to work in the Canyon.

James Johnson and Lawrence Goebel, student enrollees of the CCC, continued their geological study until the close of September 25.

Junior Geologist, [illegible], Roy A. Wilson, was occupied on geological studies as follows:

> Trail to Electric Peak from the southeast and also from the north.
>
> Interpretation of the stratigraphy and structure of the Mammoth area.
>
> Study on the stratigraphy of Devil's Slide and vicinity.
>
> Preparation of reports and abstracting of geological literature.

Junior naturalists employed during the month and the dates of separation are given below:

> Philip Fix, September 1
> Harry Woodward, September 2
> Theodore Robb, September 8
> Richard Preston, September 9
> Emmett T. Rotenberg, September 12
> Harvey L. Stork, September 12
> Byron Griswold, September 12
> Verde Watson, September 8
> Truston L. Peery, September 15
> Howard Stagner, September 15
> Arthur Nash, September 15
> Charles B. Watkins, September 15

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

ICE OF THE SUPERINTENDENT

Robert Fowler, September 20
Neil Miner, September 20

Laborers employed as Museum caretakers were Russ Ingersoll from the first of the month until 12:00 o'clock noon on September 14, and Clyde Stewart from September 1 until September 21 at noon.

Respectfully submitted,

C. Max Bauer

C. Max Bauer
Park Naturalist

CMB:ch
CC Director
Dr. Rumpus
Mr. Hall
Museum

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

Miscellaneous: Mt. Washburn
Game Stalk
Museum Talks
Artist Point
Grand View

SUMMARY OF NATURALIST ACTIVITIES

Yellowstone National Park

For month ending September 30, 193 5

Place	Field Trips: No.	Field Trips: Attendance	Auto Caravans: No.	Auto Caravans: No. Cars	Auto Caravans: Attendance	Lectures: No.	Lectures: Attendance	Special Parties: No.	Special Parties: Attendance	Museum: Attendance	Misc. Contacts: No.	Totals: Contacts Made	Publications Distributed: No.	Publications Distributed: $ Sales
Canyon	16	151				24	[illegible]	1	320		8994	9,922		
Fishing Bridge	2	33				15	1053			3428	50	4,564		97.05
Madison						10	242	4	135	1247		1,624		
Mammoth	15	461	12	79	281	14	765			6944		8,349		171.40
Mount Washburn											2400	2,400		
Norris	11	495								2983		3,478		
Old Faithful	29	1140	15	175	555	28	10095	2	101	12212		24,143		149.10
West Thumb	5	107				2	108					215		
Totals 193 5	78	2387	27	254	816	93	15718	7	616	26714	8444	54,695		$ 417.55
Totals 193 4	165	4928	25	313	1044	127	11864	3	84	20313		38,133		$ 417.75

Stations closed as follows:
Madison, September 2
West Thumb, September 2
Norris, September 8
Fishing Bridge, September 15
Old Faithful, September 15
Mt. Washburn, September 20

Park Visitors During Period: 31,755

Signed: Orrax Bauer

Miscellaneous: Mt. Washburn
Game Stalk
Museum Talks
Artist Point
Grand View

SUMMARY OF NATURALIST ACTIVITIES

Yellowstone National Park

For ~~month~~ ~~[illegible]~~ season ending September 30, 1935

Place	Field Trips No.	Field Trips Attendance	Auto Caravans No.	Auto Caravans No. Cars	Auto Caravans Attendance	Lectures No.	Lectures Attendance	Special Parties No.	Special Parties Attendance	Museum Attendance	Misc. Contacts No.	Totals Contacts Made	Publications Distributed No.	Publications Distributed $ Sales
Canyon	161	4517				167	66468	8	1293		74628	146,906		
Fishing Bridge	77	3259	73	1109	4653	92	45039	13	1652	59496	1154	115,253		
Madison						394	15397	38	1367	44481		61,245		
Mammoth	189	17325	86	1534	4716	94	17322	16	1188	96143	5448	142,142		
Mount Washburn											22597	22,597		
Norris	331	12194								52320		64,514		
Old Faithful	181	17562	91	3267	10445	181	159270	45	3873	154490	908	346,548		
West Thumb	220	15099				75	8260					23,359		
Totals 1935	1159	69956	250	5910	19814	1003	311756	120	9373	406930	104735	922,564		
Totals 1934	1513	107637	312	7905	27507	1321	287636	126	14093	310049		746,922	10706	$ 4235.65

Closing Dates:
Madison and West Thumb, Sept. 2
Norris, September 8
Canyon, September 13
Old Faithful and Fishing Bridge, Sept. 15

Park Visitors During Period: 294,191

Signed: D. Max Bauer
Park Naturalist

November 27, 1935

The Director,
National Park Service,
Washington, D. C.

Dear Mr. Director:

Responding to the request of Assistant Director Bryant, dated November 20, 1935, we are sending herewith a report of Educational Activities for the year October 1, 1934 to September 30, 1935. This is a compilation of data from the monthly reports, and it is hoped that the information is in the correct order and complete so far as we are able to make it.

Sincerely yours,

J. W. Emmert
Acting Superintendent

CMB:ch
CC Dr. Bauer
Encl.

The Director,
National Park Service,
Washington, D. C.

Dear Mr. Director:

Responding to the request of Assistant Director Bryant, dated November 20, 1935, we are sending herewith a report of Educational Activities for the year October 1, 1934 to September 30, 1935. This is a compilation of data from the monthly reports, and it is hoped that the information is in the correct order and complete so far as we are able to make it.

Sincerely yours,

J. R. Eckert
Acting Superintendent

CME:en
CC Dr. Bauer
Encl.

DEPARTMENT OF THE INTERIOR.

OFFICE OF NATIONAL PARKS, BUILDINGS, AND RESERVATIONS.

SUMMARY OF EDUCATIONAL ACTIVITIES IN NATIONAL PARKS AND NATIONAL MONUMENTS.

Yellowstone National Park [redacted] For the Year October 1 1934 to September 30, 1935

	EMPLOYEES		GUIDED TRIPS										LECTURES										MUSEUM VISITORS	LIBRARY		LECTURES OUTSIDE PARK		TOTAL CONTACTS	TOTAL NUMBER VISITORS	PER CENT CONTACTED	BROADCAST	
			AUTO CARAVANS			HIKING		HORSEBACK		BOAT		TOTAL	CAMPFIRE		LODGE		MUSEUM.		BEAR		TOTAL											Station	No
	PERMANENT	TEMPORARY	No	No Cars.	Att'd.	No	Att'd	No	Att'd	No	Att'd	No	Att'd	No	Att'd	No	Att'd	No	Att'd.	No	Att'd.	No	Att'd.	Number	No Loans	No Contacts	No	Att'd.					
October, 1934	3	2															10	430			10	430		17		1	100	530				
November, 1934	3	3															16	736			16	736		35				736				
December, 1934	3	2½				1	45					1	45				16	570			16	570		33				615	Pre-Season Visitors = 23,807			
January, 1935	3	4															11	467			11	467		24		15	2548	3015				
February, 1935	3	5															7	370			7	370		85		1	170	540				
March, 1935	3	5															4	286			4	286		70		1	167	453				
April, 1935	3	2															2	60			2	60		78		10	2135	2195				
May, 1935	3	2															2	50			2	50		92				50				
June, 1935	3	12	53	818	3260	227	13,242					280	16,502	131	12,472	10	1103	29	656	26	12,227	196	26,458	44,895	166		1	35	87,940	31,973		Butte	1
July, 1935	3	25	155	3406	13,138	585	65,613					740	78,751	316	60,383			131	9810	62	77,552	509	147,745	153,918	148				380,414	115,786			
August, 1935	3	26⅚	155	3130	11,564	709	60,873					864	72,437	314	58,282			124	14,733	62	74,194	500	147,209	181,403	130				401,049	114,677			
September, 1935	3	7⅔	27	254	816	105	8,947					132	9813	72	7,368			62	2,460	21	3,350	155	18,168	26,714	118				54,695	31,755			
TOTALS	36	97⅓	390	7608	28,778	1627	148,770					2017	177,548	833	138,505	10	1103	414	30,618	171	172,323	1,428	342,549	406,930	998		29	5,205	932,232	317,998			1

Note: Horseback and boat trips conducted almost entirely by Operators

Hotel and Lodge lectures discontinued in June, 1935

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

FICE OF THE SUPERINTENDENT

REPORT OF THE NATURALIST DEPARTMENT
for
OCTOBER 1935

I. CURRENT OPERATIONS

A. Public Contact

Visitors:..

Dr. Harlow B. Mills, Assistant State Entomologist, Bozeman, Montana. October 13.

John Ferguson, Geologist Amerado Petroleum Corp., Tulsa, Oklahoma. October 8.

Howard Stagner, Junior Park Naturalist, Grand Teton National Park. October 17.

Walter Finn, Assistant Chief Ranger, Rocky Mountain National Park. October 25.

Dr. Adolf Murie and Victor Cahalane, Wildlife Division. October 22.

Mr. Earl A. Trager, Chief Naturalist, N.P.S., and Dr. Carroll H. Wegemann, Regional Geologist, U.C.S. October 31.

William F. Crocker, Pacific Tel. & Tel. Co., San Francisco.

Lectures:..

Mr. Crowe spoke three times to pupils in the schools of Cody, to 375 on October 7th.

Plans for a winter series at Mammoth on our National Parks and Monuments were made.

B. Ranger Naturalists:

None were on duty during the month. However, the Service Records of the men during the past season were prepared and copies submitted to the Director.

II. Permanent Projects

A. Administration

The usual administrative work was carried on by Park Naturalist Bauer. Field Trips were made as follows: October 2nd to 4th inclusive to Arrow Canyon and Horseshoe Hill with Chief Ranger

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

La Noue and District Ranger Gerald Yetter. October 9th to Calcite Petrified Forest west of Big Horn Peak with Superintendent Toll, Chief Ranger La Noue, Rangers Grimm and Evans. October 30th to Hellroaring Station with Ranger Alcorn. Also completed notes and sketches for Trailside Notes from Lake to Tower Falls. Plans for winter season were made.

Assistant Park Naturalist Crowe devoted most of the month to preparation of Museums for the winter. Mounted animals and birds were cleaned and fumigated. On October 19 and 20 he visited again in the Grand Teton National Park, and with Judge Sam Swanner of Tetonia, Idaho, a scout with General Howard in his Indian campaign of 1877. He also worked five days on inventories of equipment and furniture of museums, apartments and cabins, and spent some time on Photograph filing.

Junior Naturalist Kearns continued work in the administrative office until October 9th. Immediately on return to this office, he prepared the reports on sales publications for the Yellowstone Library and Museum Association. The annual meeting of the Board of Directors was held on October 19th., and the reports and discussions indicated a very successful year, both as regards sales and purchases for the Library. Mr. Kearns completed research and articles on the Nez Perce retreat through Yellowstone. He has also done considerable typing and clerical work.

Dr. Roy A. Wilson, Junior Geologist U.S.G.S. did some work on the Geology of the Mammoth area and abstracted several geological publications.

B. Nature Notes

At the close of the month copy for the next two issues of Nature Notes was completed. Delay in the issuing of the last two numbers of Nature Notes has been due to the press of other work and the lack of sufficient stenographic help to handle it. They will be published early in November.

C. Library

Books in circulation	20
Books received during month	0
Magazines and pamphlets in circulation	7
Magazines received	26
Pamphlets received	25

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

D. Museums
Closed for the Season.

E. Equipment
None received during the month.

F. Photographs

Negatives filed.....160
Negatives in use..... 45
Prints sent out..... 14
Prints filed.....200

On October 23rd a C.C.C. enrollee was assigned to the Naturalist Department for filing, and mounting photographs, etc.

G. Lantern Slides
All slides turned in to files. Some work will have to be done on repair and revising the files.

H. Publicity Clippings
No work done.

I. Thermal Activity:

Observations by Assistant Park Naturalist Crowe.

Angel Spring shows just a trace of water. The overhanging ledge of travertine has broken off. Activity to north continues with no change from last month.

Baby Spring is flowing to the north with no increase.

Blue Springs has increased and is flowing to the south-east.

Cleopatra Spring has increased and basins are filled toward the west. Several steam vents were noticeable along the west side of the old formation.

Cupid's Cave shows a decided decrease in flowing.

Hymen Spring is still inactive.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO

OFFICE OF THE SUPERINTENDENT

Main Spring has almost stopped flowing. The new pool just to the south is almost empty. The heavy flow declined about October 15th. Sketches of Thomas Moran and pictures in the Hayden Survey reports show that this spring was quite active and covered a wide area in 1871, flowing toward the southeast instead to the north. It was then classed Summit Basin. Water is still flowing from the large crack just above and to the west of this spring.

Mound Spring has increased in flow and is steaming along a crack that extends along the north slope toward Minerva.

Mud Spring is still flowing with no change from last month.

Opal Spring no change in flowing. Travertine is being deposited at a rapid rate.

Orange Mound Spring is still overflowing on the east and and west sides.

Palette Spring has one of the heaviest flows of any of the Mammoth Springs. The flow on the west side of the Devil's Thumb has shifted to the east side.

New Springs. A third small spring has broken out within 50 feet of the other two southeast of Cleopatra Mound. The large one below Highland Terrace continues as last month. The two small springs between Cleopatra and Palette has increased a little in size.

The earthquake of October has had no effect on this thermal area.

Old Faithful Area

No change or disturbance was noticeable due to the earthquake.

Handkerchief Pool which was active during October is slowly decreasing.

Norris Area

New Geyser: An old crater in the Norris Basin became very active during the month. It is located north of the Museum about 60 feet northeast of Ledge Geyser. On October 24th it erupted mud and water 9 times to a height of 75 to 100 feet, and has erupted several times since.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

J. Personnel

Park Naturalist Bauer was on duty all month.

Assistant Naturalist Crowe was on duty all month except for four days annual leave.

Junior Naturalist Learns was on duty all month except for ½ day on October 12 and 1/8th. day on October 26.

Respectfully submitted,

C. Max. Bauer
Park Naturalist

CMB:K
CC Director
Dr. Bumpus
Mr. Hall
Museum ✓

DEPARTMENT OF THE INTERIOR

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

CE OF THE SUPERINTENDENT

REPORT OF THE NATURALIST DEPARTMENT
FOR
NOVEMBER, 1935

I. CURRENT OPERATIONS

A. Public Contact

Visitors:--

Earl A. Trager, Chief Naturalist, N.P.S. - November 1st.
Carroll H. Wegemann, Regional Geologist, ECW - November 1st.
Frank L. Aherne, Fire Protection Engineer, N.P.S. - Nov. 11-19.

Lectures:--

Nov. 5, "The Helena Earthquakes" by Dr. Bauer, assisted by Mr. Kearns. 51 present

Nov. 12, "Why We Have A National Park Service" by Dr. Bauer. 25 present

Nov. 15, "Why We Have A National Park Service" given at CCC camp 501 by Dr. Bauer, assisted by Mr. Kearns. 125 present

Nov. 18, "Earthquakes", given at evening meeting of Livingston Rotary Club by Dr. Bauer, assisted by Mr. Crowe. 85 present

Nov. 19, "Craters of the Moon and Devil's Tower National Monument", by Mr. Crowe. 32 present

Nov. 21, "The Volcanic History of Yellowstone Park" given by Dr. Bauer at Montana School of Mines, Butte, Montana. (Technical lecture to Juniors and Seniors) 82 present

Nov. 26, "National Parks and Monuments in Colorado" given by Mr. Kearns. 56 present

B. Ranger Naturalists

A letter was written to each of the Ranger Naturalists discussing their weak points, if any, and advising each of his status and if he may expect to return next season.

II. PERMANENT PROJECTS

A. Administration

Park Naturalist Bauer carried on the administrative work, laying plans for the winter work after conferences with Naturalists Crowe

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

and Kearns.

The lectures for the Mammoth community started this month and the subjects are listed in the paragraph above.

Field trips were not so easy to make because of some snow and considerable stormy weather.

Several meetings of the Heads of the Departments were attended by the Park Naturalist to discuss general plans and the work of the CCC in the Parks.

Requests for lectures outside of the Park are more frequent and a selection of most suitable contacts will have to be carefully made.

A trip was made by Assistant Park Naturalist Crowe and Park Naturalist Bauer to the Sheepeater Cliffs on November 25 to secure samples of basalt for Dr. C. N. Fenner of the Geophysical Laboratory.

Assistant Park Naturalist Crowe spent most of the month in supervising the work of several CCC enrollees on filing of photograph negatives and prints. He also prepared several suites of specimens and shipped them to the institutions which requested them.

The Assistant Naturalist also made the usual field inspection of the Mammoth Hot Springs and Terraces and prepared the report included in this one.

Junior Naturalist Kearns carried on considerable clerical work up until the middle of the month.

He also prepared the illustrations and much of the material for the July-August issue of Nature Notes. He assisted, too, with the work of the September-October issue; made the drawings for the cover and assisted with the assembling and mailing.

Mr. Kearns made several short ski trips of observation and one trip for the purpose of getting movies of Bohemian waxwings and antelope.

Miss Catharine L. Harris, permanent clerk-stenographer, Naturalist Department, arrived on November 17 and has been busy with the filing and clerical work of the Department.

B. Nature Notes

Our Nature Notes for July-August and September-October were delayed for several reasons. In the first place, the May-June number contained

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

a rather lengthy article on the Nez Perce War and in order to complete this story it was necessary to do some research work, which Mr. Kearns undertook. Owing to the press of other work, it was not possible for him to complete this research until after the close of the tourist season. The investigation having been completed, it was necessary for him to write the article and prepare the illustrations as other members of the staff were not familiar with the details. The September-October issue was prepared largely by Park Naturalist Bauer and followed on the heels of the other very closely, so the two were mailed out at the same time. It is hoped that future issues will come out on time. The November-December issue is now in preparation.

C. Library

Books in circulation.....42
Books received during November.....59
Magazines and pamphlets in circulation..... 6
Magazines received during November.....43
Pamphlets received during November.....88

D. Museums

Closed for the season.

E. Equipment

No new equipment was received during the month of November.

F. Photographs

Negatives filed..... 97
Negatives in use..... 77
Prints sent out..... 15
Prints filed.....145

G. Lantern Slides

There were 3600 feet of movie film used during the month of November; also 35 lantern slides.

H. Publicity Clippings

One CCC enrollee has been working on the newspaper clipping files the latter part of the month.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

On divide between Black Butte Creek and Daly Creek. Inspection trip - left to right: Ranger Evans, Ranger Grimm, Sup't. Toll, Acting Chief Ranger LaHoue.

Photo by Bauer

A petrified tree stump - 12 feet in diameter and extending 8 feet above present ground level.
Gallatin Petrified Forest at head of Daly Creek.
Photo by Bauer

I. Thermal Activity:

Observations by Assistant Park Naturalist Crowe.

There has been a decided increase in flow from most of the Springs during the month.

Angel Spring..The flow is just the same over the east front but two outlets are flowing again sixty feet to the south in the area that was active last spring.

Baby Spring is flowing strong from a new outlet ten feet northwest of the old outlets.

Blue Spring..More water is flowing from this outlet than at any time in the past six months. The water is filling old basins to the south and overflowing Jupiter Terrace in two places.

Cleopatra Spring shows a little increase in the flow since October.

Cupid's Cave has increased also.

Hymen Spring is still inactive.

Jupiter Spring is inactive, but a portion of the Terrace is receiving the overflow from Blue Spring.

Main Terrace..There is a little activity at the west end of this formation.

Minerva Spring is the same on the east slope but has increased to the northwest.

Niad Spring shows no change.

New Spring near Main Terrace, almost ceased flowing in October increased rapidly about November 10th, refilled the large pool and is over-flowing to the north as it did during the summer.
This area was called Summit Basin by the Hayden Survey and was active during the 70s, therefore it will be called Summit Spring in future reports.
The New Spring below Highland Terrace has decreased slightly during the month. Just to the north, a strong flow of subterranean

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

water can be distinctly heard from the surface.
Two of the three new springs near Chess Mound have increased in size.

Mound Spring is the same on the east slope but has increased to the northwest.

Opal Spring has increased in flow and a new outlet has developed ten feet south of the original one.

Orange Spring has increased at the west outlet.

Palette Spring is again starting to flow on the west side of the Thumb. The total flow is the same as that last month.

Soda Spring and Stygian Cave show no change.

Old Faithful Area

All activity in the Old Faithful Area seems to be about on schedule with the Giant Geyser having played twice during the month; the first time between November 4 and 6; and the second time on November 25th.

J. Personnel

Park Naturalist Bauer was on duty all month except for 2½ days leave, from November 8 to 11 inclusive.
Assistant Naturalist Crose was on duty all month except two half-days leave.
Junior Naturalist Kearns was on duty all month except one week of leave from November 18 to 25 inclusive.
Permanent clerk-stenographer, Miss Harris, went on duty on November 15 and worked the rest of the month.

CCC enrollees worked at the Museum as follows:
Andrew Lesko worked one day, November 4.
Harold Connor worked throughout the entire month.
Robert Trout reported on November 8 and worked throughout the remainder of the month.

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

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YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

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YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

Lewis Laverenik reported on November 20 and worked the rest of the month.

These boys are working on filing of photographs and newspaper clippings and will carry on with this type of work.

Respectfully submitted,

C. Max Bauer
Park Naturalist

CMB:ch
CC Director
Dr. Pampus
Mr. Hall
Museum

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

DEPARTMENT OF THE INTERIOR

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YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

REPORT OF THE NATURALIST DEPARTMENT

FOR

DECEMBER, 1935

I. [illegible]

A. Public Contact

Visitors:

Edwin A. Bussey, Fairbanks, Alaska.

Lectures:

December 3, "Yosemite National Park" (illustrated) by Acting Superintendent J. A. Ebert, at Mammoth - 58 present

December 4, "Naturalists in the National Parks" by Assistant Naturalist George C. Crowe, at State College Assembly, Bozeman, Montana 700 present

December 4, "Yellowstone Park in Winter" (illustrated) by Assistant Naturalist George C. Crowe, before the Sigma Xi society and guests at Bozeman, Montana 80 present

December 10, "Grand Canyon, Zion and Bryce National Parks" (illustrated) by Park Naturalist Bauer 39 present

December 17, "Glacier, Mt. Rainier, and Crater Lake National Parks" (illustrated) by Junior Naturalist A.A. Kearns, R. A. Hundley, and F. C. Bussey 38 present

December 31, "Sequoia, General Grant National Parks and Muir Woods National Monument" (illustrated) by Engineer A. A. Wallace and George C. Crowe 40 present

B. Ranger Naturalists

A news letter of winter activities of the park and Holiday Greetings was mailed to the summer staff of 1935.

A number of applications for ranger naturalist positions for 1936 have been received.

II. [illegible]

A. Administration

The administrative work was carried on by Park Naturalist Bauer until December 21. From then on to the end of the month

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

Assistant Naturalist Crowe had charge of the work in the absence of Dr. Bauer. Place Names list and preliminary draft of the report was completed and copies mailed to Mr. Toll and Mr. Haynes.

Assistant Naturalist Crowe assisted with the editing, assembling, and mailing of Nature Notes; prepared and gave talk on Muir Woods, General Grant, and Sequoia Parks; cleaned up the furnace room to reduce fire hazard; supervised the work of the CCC enrollees in their work on photographic files and clippings; spent some time in looking up autobiographies in the Place Name list; and cared for the correspondence and routine office work during Dr. Bauer's absence.

Junior Naturalist Kearns assisted with the organization, typing, and writing of the November-December issue of Nature Notes, made the drawings, cut the stencils for the illustrations, and did the mimeographing of the cover in two colors, and also assisted with the assembling and mailing of the edition; spent several days working on Place Name biographies; gave a lecture at Mammoth on "Glacier, Mt. Rainier, and Crater Lake" assisted by Fred Bussey and Ben Hundley; packed movie projector and graflex and sent them to the factories for repair; overhauled two 35 mm projectors; dictated correspondence for the department; devoted one-half day to making enlargements of Buffalo pictures; wrote "Christmas Letter" to the ranger naturalists and mimeographed it; and devoted one day to work on matters pertaining to Publications. Mr. Kearns also made several trips to the Buffalo Ranch for action pictures of the round-up. He also photographed the new geyser at Morris Basin in moving pictures.

Catharine Harris, permanent clerk-stenographer, has been busy with the filing and clerical work of the department, accessioning of new library books, and the typing of the Place Name list. Miss Harris also assisted with the clerical work in the Superintendent's Office for several hours almost every day from December 21 until the end of the month, the time totaling about 3½ days.

B. Nature Notes

The November-December issue devoted chiefly to thermal activity, total 900 copies - 800 were mailed out.

A number of requests have been received from teachers and others that they be placed on the mailing list.

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C. Library

Books in circulation.....37
Books received during December.....20
Magazines and pamphlets in circulation..... 8
Magazines received during December.....18
Pamphlets received during December.....37
New Books prepared for the stacks.....25

D. Museums

Closed for the winter. A number of visitors have viewed the Mammoth Museum, however.

E. Equipment

Equipment received during December include one new Weston Exposure Meter, one Brunton Compass from the Washington office, and one specimen collecting bag.

The 16 mm projector and a 4x5 Graflex have been shipped to the factories to be overhauled.

F. Photographs

Negatives filed.....125
Negatives in use..... 89
Prints sent out for publicity, schools, etc. 65
Prints in albums filed in December.....157

G. Lantern Slides

Slides secured from other Parks for Lecture Series...213
Our own slides used during December..... 45
Six reels of movies were also loaned by other Parks.

H. Publicity Clippings

The classification of newspaper clippings by subjects has been completed. The total number, counting duplicates of various releases, is 5563. Separate stories filed in scrap books total 2959. A few of the general subjects are as follows:

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ICE OF THE SUPERINTENDENT

Opening and Closing Dates.....[illegible]
Travel Information.....[illegible]
Weather Conditions.....[illegible]
Visitors.....[illegible]
Conventions.....[illegible]
Airport and Airmail via West Yellowstone.....[illegible]
Animal Life.....[illegible]
Ranger Activities.....[illegible]
Naturalist Activities.....[illegible]
Thermal Activity and Geology.....[illegible]
History.....[illegible]
Editorials.....[illegible]
Pictures - rotogravure and syndicated.....[illegible]
Construction and reemployment.....[illegible]
ECW.....[illegible]

I. Thermal Activity

Observations by William [illegible], Junior Naturalist

Angel Spring - Activity is slightly less than in November, with no water flowing from the top over the main terrace as it did last summer. The vent to the north and part way down the slope is flowing with about the same volume of water as in November. There is less activity from the vents to the south of the main terrace.

Baby Spring shows a decided increase with the water gushing out to a height of eight to ten inches, from a vent some twelve feet below the main mound vent.

Blue Spring - This temperamental spring has been quite active during the month and has shown a decided increase in the green and blue-green algues. Within the last three days of the month, this spring has quite suddenly gone entirely dry except for a small pool to the northeast.

Cleopatra Spring is flowing with approximately the same amount of water as in November.

Cupid's Cave continues at the end of the month with a strong flow both from old vents, and also from three small

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new ones which are near the main a little to the south of the main vent.

Hymen Spring continues to be inactive.

Jupiter Spring shows no evidence of renewed activity.

Main Terrace continues with very little activity at the extreme east end.

Minerva Spring shows a slight increase with the lower pools filled with water and escaping into cracks near the edges. Judging by the steam evident from the topmost vent, there is a possibility of this entire terrace becoming active in the near future.

Naiad Spring - The flow from this spring is very moderate, and of such low temperature that ice has formed on the slope up to within a short distance of the outlet.

New Spring (Orvait Spring, according to the Hayden Survey) continues with a strong flow and with a decided shade in color from the increase of the algae, with pinks, light oranges, and lemon yellows predominating.

The New Spring at the foot of Highland Terrace evidences about the same activity as in November, as do the three vents near Cheops Mound.

Nymph Spring - The flow to the northwest is about the same as last month.

Opal Spring is flowing about the same as in November both from the old and the new vents.

Orange Spring - The flow to the west is less than last month, and the algae is of a yellow-green color.

Palette Spring - The main flow is again to the east of the Thumb, but the total flow is about the same as for the past two or three months.

Rabbit Spring continues about the same.

Stygian Cave shows no change.

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Old Faithful Area

Ranger Verda Watson reports that the Giant Geyser erupted on December 8, and once since then, though the exact date is not known. He believes that the Giant is erupting on about the same schedule as during the summer, once in every twelve or fourteen days.

Norris Geyser Basin

The Vent Geyser which was reported early in December as erupting on an average of every seven minutes, was observed by Assistant Naturalist Crowe and Junior Naturalist Learns on December 7. Movies were taken of the eruptions and definitely show the quantities of mud and water which was hurled into the air to heights of nearly 100 feet. During the period of observations, the interval of eruptions varied from 6 to 13 minutes. Since the rounds have been closed no additional observations have been made.

J. Personnel

Park Naturalist Bauer was on duty all month except for 6 days annual leave.

Assistant Naturalist Crowe was on duty all month except for 2½ days of annual leave.

Junior Naturalist Learns was on duty all month except for ½ day of annual leave.

Miss Harris was on duty all month except 1½ days of sick leave.

Three CCC enrollees worked at the Museum on photographic files and clipping scrapbooks during the month as follows:

Lewis Haverstalk took 5 days leave at Christmas time.

Robert Trout took 2 days leave during the month.

Harold Conner worked throughout the entire month.

Respectfully submitted,

C. Max Bauer
Park Naturalist

CCC:ch

cc Director
Dr. Demaray
Mr. Hall
Dr. Russell
Museum

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ICE OF THE SUPERINTENDENT

REPORT OF THE NATURALIST DEPARTMENT
FOR
JANUARY, 1934

I. [illegible]

A. Public Contact

Visitors:

Lee Orr and James Carter of Fox Movietone were in the Park during the last two weeks of the month taking stills and sound movies.

The Montana Fish and Game Commission consisting of:
Mr. Kenneth MacDonald, State Game Warden.
Mr. Lowe, Chairman of the Commission.
Messrs. Harper, Baumgartner and Gutenswalm, members, were in the Park from January 17 to 19 inclusive.

Engineer Ed Nickel, N.P.S., San Francisco, California.
Engineer L. J. Sanchez, N.P.S., San Francisco, California.

Lectures:

The following lectures were given during the month under the supervision of the Park Naturalist:

January 7, "The National Monuments of the Southwest" (Illustrated) - by C. Max Bauer — 31 present

January 14, "The National Historical and Military Parks and Sites" (Illustrated) - by W.E. Mourns — 30 present

January 15, 6:45 P.M., "Wildlife in Yellowstone" (Illustrated) - by C. Max Bauer to Sigma Xi Club, Bozeman, Montana — 42 present

January 15, 8:15 P.M., "The Geological Story of Yellowstone Park", (Illustrated) by C. Max Bauer to students of Montana State College and the public — 112 present

January 17, "Conservation of our Natural Resources" (Introductory lecture to CCC and others by C. Max Bauer — 215 present

January 21, "Our National Capital Parks" (Illustrated) by George C. Crowe — 35 present

January 24, "Forest Conservation" (Illustrated) by Maynard Farrows to CCC and others — 75 present

January 24, "Conservation as a Means of Employment" by Joseph Joffe to CCC and others — 73 present

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January 28, "Acadia, Shenandoah, and the Great Smokies" (Illustrated) by C. Max Bauer 44 present
January 29, "Conservation of Plant Life" (Illustrated) by George Walker to CCC and others 54 present
January 31, "Conservation of Soil" (Illustrated) by Rudolph Grimm to CCC and others 38 present

B. Ranger Naturalists

Some correspondence was carried on with last year's staff. Several of them are giving occasional lectures on Yellowstone.

II. PERMANENT PROJECTS

A. Administration

Park Naturalist Bauer has continued work on land names, planned for a pamphlet on the work of the Yellowstone Library and Museum Association for the last three years (Most of the compilation of this booklet was been done by Junior Naturalist Kearns); and carried on the correspondence and supervision of the Naturalist work. The Course on Conservation for the CCC enrollees was planned in cooperation with Mr. George Miller and lecturers aided and supervised.

Assistant Naturalist Crowe was occupied with many details of the routine work. During the month he supervised the work of three and four CCC enrollees, assisted several of the speakers on the Conservation lecture program to obtain material for their lectures, and made numerous placards and posters for the bulletin board. Mr. Crowe continued the filing of negatives and revised the filing of slides so that lantern slides may be more readily selected. All clippings were filed to date. In addition, he assisted with many programs and in various other ways carried on the work of the Naturalist Department. His report on Mammoth Hot Springs is included herewith.

Junior Naturalist Kearns, in addition to other things mentioned elsewhere in this report, made four field trips during the month. On one trip, from January 17 to 22 inclusive, he accompanied photographers Orr and Porter to the Norris Geyser Basin and obtained many beautiful winter pictures. Mr. Kearns prepared the January-February issue of Nature Notes, carried on much of the correspondence of the Yellowstone Library and Museum Association,

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worked on Place Name Biographies, received projectors, and handled numerous other activities. He also prepared and edited the booklet of the Yellowstone Library and Museum Association activities covering the period of the last three years.

In addition to her regular duties, Miss Lavyle is now collecting items and putting out the Daily Bulletin of Activities.

B. Nature Notes

The January-February issue of Nature Notes on winter activities and wildlife was prepared and stencils cut.

C. Library

Books in circulation.....79
Books received during January.....35
Magazines and pamphlets in circulation.....10
Magazines received during January.....26
Pamphlets received during January.....56

D. Museums

Closed for the winter.

E. Equipment

Equipment received during January was as follows: one rebuilt Movie Machine sent by us to the factory to be changed from 400 watts to 750 watts; and two new 750 watt bulbs; 3 plant presses.

F. Photographs

Negatives filed..... 186
Negatives in use..... 168
Prints sent out..... 72
Prints received..... 235

G. Lantern Slides

Slides used during January..... 87
Slides secured from Washington for lecture Series.....157
Two reels of movies were also sent by Washington for a lecture.

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10309-6 Kearns

When a Buffalo takes a fast corner there is action for all concerned.

10310-1 Kearns

Coming in on the run with the thermometer registering 20° below zero.

10511-S Kearns
Stygian Caves on the upper terraces of the Mammoth Hot Springs has almost been closed by ice and snow.

10511-6 Kearns
Junior Naturalist Kearns accompanied Fox Movietone News men to Norris Geyser Basin for stills and movies, January 17-23 inclusive. (7½ miles out, northwest of the highway.) Gallatin Mountains in the background.

H. Publicity Clippings

The current newspaper clippings of the month are filed up to date.

I. Thermal Activity

Mammoth Hot Springs by George Cross

Angel Spring - The new activity on the south end at the main outlet continues as reported in December. A new outlet is noticeable about seventy feet to the north of the old center of activity.

Baby Spring is still spurting six to eight inches high at the new outlet and has built up a basin about six inches deep and ten to twelve feet across.

Blue Spring was dry the first of the month but started flowing about the 5th continuing the remainder of the month. The flow is not as heavy as early in December. The new outlet to the west is still flowing.

Cleopatra Spring has decreased in flow, flowing a heavy flow on the 15th. Fumeroles are steaming for fifty feet along a creek a little to the southwest.

Cupid's Cave Spring has increased in flow and is spreading over a wider area as the waters rise to the surface along an old crack to the east.

Main Spring continues to flow a little at the east end of this formation.

Minerva Spring has decreased in flow the latter part of the month. The water level has dropped ten inches in the largest pool.

Mound Spring - no change.

Naiad Spring - The flow is the same and a large amount of ice has frozen on the northeast slope.

Orange Spring Mound - The outlet that has been spurting up two or three inches has decreased to a quiet flow.

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Opal Spring has increased in flow and has widened a little toward Capitol Hill. At least three inches of travertine have been deposited on the rim of the lower basin during the month.

Palette Spring - The flow is approximately the same and is about equally divided to the east and west of the Devil's Thumb.

Summit Basin Spring continues with a heavy flow of water. The pool has spread out over a wider area, as the water level is raised by deposition of travertine at the outlet.

The large crack on the slope above filled with hot water during the summer and fall of 1935 is now empty.

New Activity - The three small springs south of Cheops Mound, reported first last summer, are still active. The flow from the largest one has extended about 40 feet to the east and west at the base of Cheops.

A new fumerole steaming near the road in this area has killed several cedar trees.

The new spring between Palette and Cleopatra, though small, continues the same as in December.

Observations at Norris Geyser Basin
by
Junior Naturalist Kearns

Ledge Geyser is steaming actively but not observed in action.

New Geyser (about 45 yards northeast of Ledge Geyser) is boiling up vigorously to heights some six to eight feet above the ground level but did not erupt during the three days which it was observed. This Geyser had been observed early in December and was seen to erupt to heights of at least one hundred feet.

Congress Pool was quiet, and water level down about three feet below margin of pool.

Monarch Geyser - Bubbling, but otherwise quiet.

Minute Man Geyser - Steaming steadily, but did not erupt when under observation.

Emerald Spring - Very active. The great clouds of vapor rising from this Spring condenses and freezes on the nearby trees and helps to create some unusually beautiful "Ghost Trees."

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Vicinity of Carnegie Hill Vole - [illegible] very active, and several small springs boiling violently.

Porcelain Hill - More active than when observed in October and December.

Whirligig Geyser - This geyser was observed several times and erupted to heights of from twelve to twenty feet.

Constant Geyser continues quite active.

New Geyser (about 25 yards south of Sun Geyser) This small "new geyser" was very active, erupting to a maximum height of about 25 feet, with a very symmetrical column of water. At one time this geyser played for nearly twenty minutes.

J. Personnel

Park Naturalist Bauer was on duty all month except January 2.
Assistant Park Naturalist Crowe was on duty all month except for 1½ days of annual leave and 1 day of sick leave.
Junior Naturalist Kearns was on duty the entire month.
Permanent clerk-stenographer, Miss Harris, was on duty all month.

Three CCC enrollees, Lewis Laversenik, Harold Connor, and Robert Trout were on duty all month, and one CCC enrollee, Robert Shulse, was on duty from January 20 to the end of the month.

Respectfully submitted,

C. Max Bauer
Park Naturalist

CMB:ch
CC Director
Dr. Bumpus
Mr. Hall
Dr. Russell
Museum

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REPORT OF THE NATURALIST DEPARTMENT
FOR
FEBRUARY, 1936

I. CONTACT WORK

A. Public Contact

Visitors: There were no special visitors during February.

Lectures: The course of lectures on "The National Parks and Monuments" was completed on February 18. The subjects and speakers during the month were as follows:

February 4, "Proposed Parks, including The Olympic Peninsula, Isle Royal, and The Everglades" by [illegible]. S. Kearns 28 present
February 11, "Museums in Our National Parks" by George Crowe 19 present
February 18, "Our Educational Program in Yellowstone Park" by C. Max Bauer 26 present

The lectures on Conservation to the CCC enrollees continued through the month to February 21. The subjects and speakers were as follows:

February 5, "Our National Recreational Resources" by Assistant Naturalist George Crowe 44 present
February 7, "Wildlife Agencies Assisting in Conservation" by Junior Naturalist W. S. Kearns 54 present
February 12, "The Nation's Water Supply" by Chief Engineer C. A. Lord 56 present
February 14, "The Value of Wildlife" by Ranger Sheldon Dart 41 present
February 19, "Organization For the Protection of Wildlife" by Chief Ranger F. L. La Roue 36 present
February 21, "A General Survey of our Primeval Resources" by Assistant Chief Ranger George Miller 34 present

On the evening of February 21 an examination was given on the course of eleven lectures. Nineteen CCC enrollees took the examination and only one failed. Eleven others including foremen and Park Service employees took the examination

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and passed. The lectures are being mimeographed and will be bound together to form a series of lectures on the "Conservation of our Natural Resources." Within a month we expect to distribute these to those who are interested. It will form a basis for future work along this line.

B. Ranger Naturalists

Two or three of our old men whom we were expecting to return this season have indicated that they may not do so because of other work which they consider more important. Dr. H. E. Stork writes that he will very likely go to Costa Rica on a botanical expedition. Dr. A. T. Rodenberg writes that he may consider a state park position in the East, and Dr. Robert Fowler may have to teach in summer school at the Colorado Agricultural College.

However, we have more than 30 applicants for the few positions which we have to fill. Among the applicants we find that the qualifications on the whole are much better than previous years. Many of the men are very well trained and have taken the opportunity to secure special training for Park Service work through the Yosemite Field School, and in other ways have obtained training which is very valuable.

II. Publications

A. Administration

Park Naturalist Bauer worked several days on preparing a synopsis of the new publication on "The Hot Springs of Yellowstone Park" by Drs. E. T. Allen and Arthur L. Day of the Carnegie Institution of Washington. This book represents more than seven years of research on the hot springs and geysers and is a splendid contribution to the subject which is valuable to volcanism and other important phases of geology. The synopsis will be used by the ranger naturalists and others interested in obtaining a quick understanding of the findings of Drs. Allen and Day. However, it is recommended that everyone who has time to do so should read Publication No. 466 of the Carnegie Institution of Washington. It contains over 300 pages of well written description, history, and scientific

discussion of theory on the hot springs and geysers of Yellowstone, and also contains about [illegible] illustrations.

The Park Naturalist also supervised the lecture campaign being given and the general work of the Department. Considerable time was spent in studying the applications for ranger naturalist positions.

Assistant Naturalist Crowe carried on the supervision of the work of four CCC enrollees; was acting Chairman of the Executive Committee of the Federal Employees, which carries on quite a few activities during the winter; prepared several suites of specimens for schools and colleges and shipped them out, and cared for many of the details of the Department.

Junior Naturalist Kearns took part in the lectures as indicated above. From February 11 to [illegible] inclusive he made a lecture trip through Wyoming including Casper, Bismarck, Sheridan, Buffalo, and Mills. During this time he gave [illegible] lectures to a total of 6,[illegible] people. These lectures were given to boy scout organizations, civic clubs, schools, etc. The schedule of lectures was arranged by Scout Executive Ralph Childs of Casper.

He also prepared some articles and illustrations for the "Yellowstone Nature Notes" and assisted in the routine of the office work.

Miss Harris, the clerk-stenographer for the Department, carried on the regular duties and in addition took charge of the Daily Bulletin of Activities, as well as doing the stenographing for the series of lectures on "Conservation of our Natural Resources."

B. Nature Notes

As soon as the covers are printed, the January-February issue of "Nature Notes" will be distributed. We hope this will be within the next week.

C. Library

Books in circulation..... 6[illegible]
Books received during February..... 4[illegible]

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Magazines and pamphlets in circulation.....19
Magazines received during February.....47
Pamphlets received during February.....47
Books labeled with shelf list numbers.....45

D. Museums

Closed for the winter.

E. Equipment

We received a Spencer Petrographic Microscope similar to Model 5B D. This was purchased from funds of the department and will be a valuable instrument in our laboratory in the study of rock materials from the [illegible] streams.

F. Photographs

Negatives filed..... 450
Negatives in use..... 100
Prints sent out..... 75
Prints received, mounted, labeled..... 350

G. Lantern Slides

Slides used during February..... 211
Slides secured from Washington for lectures..... 50
Movie film used in lectures.....5700 feet.

Included in the first item under "Lantern Slides" are 50 winter slides sent to Frank Childs to be used in lectures in Washington, D. C.

H. Publicity Clippings

Quite a number of newspaper clippings have been received during February, but none have been filed.

I. Thermal activity

Mammoth Hot Springs by George Crowe and R.E. Kearns

Angel Spring is again active from the old vent which we

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have been considering as the main vent and a strong flow also continues on the top of the terrace to the south. The vent around to the north shows considerable increase by the vigorling activity of a new vent that has broken out to the northeast immediately in the center of the trail giving Angel Terrace considerable prominence at this time. This new vent measures approximately 20 by 24 inches, is oval in shape, and the water is boiling up from 6 to 8 inches in height, and the overflow is spreading out over a great area below. If this activity continues, the run-off will undoubtedly flow over the face of the old terraces which were prominent in days gone by.

On the hill to the north of Angel Terrace a new spring is flowing with a considerable volume of water.

Baby Spring has increased in flow and the water is spurting up about eight inches high at the outlet.

Blue Spring shows increasing flow to the west and south with fresh white deposits of travertine plainly visible. A small new outlet has developed and formed a pool at the base of the ridge near Cupid's Cave.

Cupid's Cave Spring shows no change.

Glenn Spring is increasing its flow.

Crown Spring is still inactive.

Main Spring shows no change from last week.

Minerva Spring has ceased overflowing and the water level has lowered four inches in the large pool on top.

Mound Spring has increased slightly.

Naiad Spring has also increased and a larger area on its slopes are free of ice and snow.

Opal Spring continues with the rapid deposition of travertine and the waters have spread over a greater area.

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Pebble Spring - More than three-fourths of the flow has shifted to the west of the Devil's Thumb, as it was in 1933. This change is due to the deposits having been built up a little higher on the east slope during the past two years.

Prospect Spring - This name will be used in referring to the new spring on Prospect Terrace directly below Highland Terrace. This spring has been flowing steadily for more than a year.

Pulpit Terrace shows no activity.

Dermid Basin Spring has increased in flow and as the deposits are increased at the outlet to the north, the calcite level has raised, increasing the area of the large pool. The algae are much darker shades of brown than during the summer.

J. Personnel

Park Naturalist Bauer was on duty all month except one day of sick leave and ½ day of annual leave.

Assistant Naturalist Greta was on duty all month except ½ day of annual leave.

Junior Naturalist Kearns was on duty all month.

Permanent clerk-stenographer Miss Harris was on duty all month.

Four CCC enrollees, Lewis Zaversnik, Harold Connor, Robert Ernst, and Robert Hulse assisted in [illegible] during the month.

Respectfully submitted,

C. [illegible] Bauer
Park Naturalist

CMB:ch
CC Director
Dr. Bumpus
Mr. Hall
Dr. Russell
Museum ✓

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REPORT OF THE NATURALIST DEPARTMENT
For
MARCH, 1936

I. [illegible]

A. Public Contact

Visitors: [illegible] of the [illegible] Deputy [illegible] visited the Museum during the Elk count.
On March [illegible] Superintendent Robert Yellowtail of the [illegible] Indian Reservation and two Indians, [illegible] and [illegible], visited Mammoth and gave an entertainment at the [illegible]. Lantern slides illustrating the Bighorn Canyon were shown.

Lectures:

The lecture courses of the Winter were completed in February.
On March 13, Assistant Naturalist Crowe gave an illustrated lecture in Livingston on the subject "Yellowstone in Winter" to the Woman's Club, there being about [illegible] present.

B. Ranger Naturalists

Early in the month the Ranger Naturalists for this coming season were selected. This included fifteen former Ranger Naturalists and four new men. Their appointment has been requested and the men notified of their selection. The new men have been [illegible] literature in order to prepare themselves for the [illegible].

II. [illegible]

A. Administration

The work of the Naturalist Department during the month consisted largely of the selection of Ranger Naturalists and the handling of a large amount of correspondence. Park Naturalist [illegible] supervised the work, and as Executive Secretary of the Yellowstone Library and Museum Association supervised the publication of "Bulletin No. [illegible]" on the Organization and Membership of the Association. This Bulletin is now ready for distribution. He also spent some time on the preparation of "Trailside Notes, No. II, from the Fishing Bridge Museum to Mammoth Hot Springs," a bulletin which will probably be

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published this spring as a companion for No. I which has been sold for the past three years.

Assistant Naturalist Crowe supervised the work of four CCC enrollees which had to do with the filing of photographs, the filing and labelling of herpetrium specimens, the preparation of some pictures and other material for [illegible] purposes, the shellacking and filing of lantern slides, and the preparation of equipment for the use of the Ranger naturalists during the summer. Mr. Crowe also supervised the planning and arranging of the museum storage rooms and the cataloguing and mailing of Nature Notes. He also lettered the new books for the library from time to time.

Junior Naturalist Kourns made out orders for the sales publications for the coming season, assisted with filing and clerical work, and assisted the Ranger Department with the elk count. For several days he was ill with the flu and on March 21 was taken to the Livingston Hospital for observation and was in the Hospital the remainder of the month. He is now recovering satisfactorily.

Miss Harris, clerk-stenographer for the Department, carried on the regular duties of this position throughout the month with the exception of leave which is tabulated at the end of this report.

B. Nature Notes

Some work on Nature Notes illustrations has been carried on by Park Naturalist Crowe and Mrs. Crowe. The next issue will appear in April and the subject will be "Thermal Activity of Yellowstone Park" based on the Monograph by Drs. Allen and Day of the Carnegie Institution of Washington.

C. Library

Books in circulation.....	44
Books received during March.....	15
Magazines and pamphlets in circulation..	19
Magazines received during March.....	10
Pamphlets received during March.....	65
Books lettered for Shelf Lists.....	70

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E. Museum

A side saddle was donated to the Museum by the Hall Brothers of W. A. Hall Company of Gardiner, Montana.

A Stellar Jay and a Cedar Waxwing were obtained as study skins for the collection.

I. Equipment

Considerable time was spent by the Park Naturalist and the Assistant Naturalist in assisting the Storehouse clerk with inventories for all the Museums and the Library.

F. Photographs

Negatives filed.....	400
Negatives in use.....	30
Prints sent out.....	[illegible]
Prints received.....	[illegible]
Photographic records and labels typed.....	450

G. Lantern Slides

Slides used.....	[illegible]
Slides unclassified.....	500

H. Publicity Clippings

A number of newspaper clippings were received during the month and all have been filed, so this work is now current.

I. Thermal Activity by Assistant Naturalist [illegible]

Mammoth Hot Springs

Angel Terrace is flowing slightly at the outlet of [illegible] summer. A shallow hot pool, 30 feet across, is in existence 50 feet to the south. The new activity, 100 feet to the north on the trail, has increased in flow.

Main Terrace has increased a little during the month.

-2-

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Blue Spring has increased in flow and the basins are filled over a wider area. The overflow to the south continues.

Cleopatra Spring decreased in flow more than half. The waters do not reach the lower slope.

Cupid's Spring has increased. The greater amount of water is flowing from a crack a little below the upper outlet.

Hymen Spring is still inactive.

Main Spring is inactive.

Minerva Spring ceased flowing during the month. The lower pool on top is empty.

Jupiter Terrace - very little water can be seen on the slope.

Mound Spring has the same flow as last month and the basins which are forming can be seen from the main highway.

Naiad Spring shows no change.

Opal Spring has increased noticeably and the basin rims are building up rapidly with travertine.

Orange Spring Mound shows no change.

Palette Spring has decreased one-third of the flow of last month. All the water is on the west side of Devil's Tank.

Prospect Spring has greatly increased and several new outlets are flowing strong a few feet to the west. The water is now flowing north on the surface more than 60 feet to the direction of the underground flow which can be heard distinctly.

Summit Basin Spring has increased in flow and the water level has risen about two inches. The large crack on the mound just above the pool is empty.

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The new activity south of Cheops Mound is slowly increasing, especially the spring nearest the loop road. The overflow extends down the road 50 feet.

J. Personnel

Park Naturalist Bauer was on duty all month except one-half day of annual leave.

Assistant Naturalist Crowe was on duty all month except three half-days of annual leave.

Junior Naturalist Bearns was on duty except for sick leave as follows: March 9 to 11 inclusive and from March 21 through the remainder of the month.

Permanent clerk-stenographer Miss Harvie was on duty except for five days annual leave from March 18 to 20 inclusive, and leave without pay from March 21 to 27 inclusive.

Four CCC enrollees assisted with the Museum work until March 25. Lewis Severenik and Robert Shales continued through the month and Harold Conner and Robert Trout completed their enlistments and returned home.

Respectfully submitted,

C. Max Bauer

C. Max Bauer
Park Naturalist

CMB:ch
CC Director
Dr. Bumpus
Dr. Russell
Mr. Hall
Museum

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[illegible]

[illegible], 1950

I. [illegible]

A. Public Contact

Visitors: On Sunday, April 19, the road was opened to Old Faithful for the first time this season. About 35 cars made the trip to the Upper Basin and a total of about 100 visitors were in the Park at that time. For the next few days the road was closed to permit further drying and since then has been open continuously although we have had one pretty good snow storm.

Several visitors were permitted in the Museum at Mammoth Hot Springs as they had come a long ways, and we attempted to give them some idea of Yellowstone and general information.

On April 18 Mr. Kent of Gardiner brought up the Boy Scouts consisting of 9 boys and the Scout Master to visit the Museum, and Mr. Crowe, the Assistant Park Naturalist, took them on a nature walk, on which about 15 species of birds were observed.

Lectures: No lectures were given during the month.

B. Ranger Naturalists

The Ranger Naturalists for the coming season were selected in March. However, during April there were several that advised us that they could not accept the appointment. Therefore, replacements were made from the alternate list. Several memoranda were sent out during the month to the Ranger Naturalists.

II. [illegible]

A. Administration

The Park Naturalist, in addition to supervising the work of the Department, continued work on "Trailside Notes, No. 2" which covers the trip from Fishing Bridge Museum through

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YELLOWSTONE NATIONAL PARK

Canyon and Tower Falls to Mammoth Hot Springs. Some work was also done on the Place Names of Yellowstone National Park. He also acted as a member of the Board of Surveys and attended conferences of the Acting Superintendent and Department Heads and also acted on the Uniform Committee with Acting Chief Ranger LaDoux.

Assistant Naturalist Crowe supervised the work of the CCC enrollees. During the month numerous labels were prepared and lettered; also a complete reorganization of the lantern slide files and repair of lantern slides was carried on. Photographic files were continued currently and many other details of preparation for the season were carried on by this group.

Junior Naturalist Kearns was in the Livingston Hospital until April 20 when he returned to work but owing to his weakened condition, he was unable to put in full time until the beginning of the week of April 27. Since that time he has been working on illustrations for the Superintendent's Annual Report and also has been taking care of the bills of the Yellowstone Library and Museum Association.

Miss Catharine Harris, clerk-stenographer, has carried on the regular duties of this position and in addition has done a great deal of mimeographing for the other departments.

B. Nature Notes

This month the March-April issue of Nature Notes was mimeographed and mailed out to about 800 addresses. A large number of requests for additional copies of this issue have been received, as well as some very kind letters regarding the character of the issue.

C. Library

Books in circulation	63
Books received during April	43
Magazines and pamphlets in circulation	14
Magazines received during April	24
Pamphlets received during April	88
Books numbered and processed	43
Books repaired	8

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D. Museums

Preparation work is going on for several cases in the Mammoth Museum and one at the Madison Junction Museum.

Twenty groups of pictures were accessioned by Miss Harris and Mr. Crowe.

Ranger Hayes Alcorn, assigned to the Museum for ten days, copied 100 herbarium labels and invoiced the [illegible] publications which had arrived up to that time.

E. Equipment

Two album covers and sheets and additional screws were obtained by the Yellowstone Library and Museum Association for the photographic files. Our Graflex, 4 x 5, camera was returned from the factory where it had been sent for repairs.

F. Photographs

Negatives filed.....	[illegible]
Negatives in use.....	102
Prints Sent Out.....	35
Prints Received.....	97

G. Lantern Slides

Slides Used.....	161
Movie Film Sent Out.....	250 feet
Slides repaired and processed.....	42

H. Publicity Clippings

The file of newspaper clippings was kept current during the month, there being 675 clippings classified and filed.

I. Thermal Activity

Mammoth Hot Springs
by
Assistant Naturalist Crowe

Angel Spring still continues the heavy flow of the past two months from the new outlet. Beautiful basins have formed on the slopes below, eight to twelve inches across and four

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inches high. Just below the outlet, a large fan-shaped deposit of fibrous appearing travertine has built up to a thickness of twelve inches. A pool ten feet in diameter has formed about sixty feet down the slope.

Gulf Spring - The overflow has covered a larger area the past month than at any time since November, 1935. It is flowing over the front of Jupiter Terrace near Palette, and a stream of water six feet wide and from one to two inches deep is flowing around the south end of Jupiter. The bottom of a pool thirty feet in diameter has dropped two feet and all the water drained out.

Cleopatra Spring has increased one-third over the flow of March.

Cupid's Spring has doubled its flow and has filled the pool again at the bottom of the formation.

Hymen Spring is still inactive.

Highland Spring is still inactive.

Jupiter Spring is still inactive.

Main Spring shows just a little seepage.

Minerva Spring is still inactive.

Mound Spring has been building up several large beaches during the past year that are now plainly visible from the highway below.

Naiad Spring has decreased more than half the flow of last month.

Opal Spring shows no change in the strong flow of March.

Orange Spring Mound shows no change.

Palette Spring is flowing strong. All the water is covering the slope west of the Devils Thumb as in 1933 and 1934.

Prospect Spring is still flowing strong as in March. The surface water is disappearing in two openings about 75 feet

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from the outlet.

The bottom of the fumarole near the road at this point has settled two feet, undermined by flowing water plainly heard from the surface.

Summit Basin Spring is still overflowing to the north. The water disappears in large cracks at the foot of the cascade and some of it reaches a point below Minerva.

The new springs near Cheops Mound continue as in March.

Norris Geyser Basin
by
Assistant Naturalist Crowe

In a visit to this Basin on April 10 no changes were noticed with the exception of Constant Geyser. It appears to have been inactive all winter, the tube and pool being heavily covered with algae.

The new geyser reported in December, 1933 is still erupting steadily to a height of eight feet.

Samples of geyser water were taken for the Department of Chemistry of Carleton College, Northfield, Minnesota.

A temperature of 199° F. was taken in a new spring near the parking area on the east side of the Basin.

Upper Geyser Basin
by
Ranger Verde Watson

Giant Geyser erupted on April 9 and April 20; Lion and Vault both erupted three times on April 17; and the Beehive Geyser erupted on April 19.

J. Personnel

Park Naturalist Bauer was on duty all month except one-half day of annual leave on April 29.

Assistant Park Naturalist Crowe was on duty all month except 1¼ days annual leave.

Junior Naturalist Evarts was on annual leave from April 1 to April 18 due to sickness. From April 20 to the end of the month he was on sick leave for five days.

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Permanent clerk-stenographer, Miss Harris, was on duty all month except one day of sick leave on April 24.

Ranger Wayne Alcorn was assigned to the Museum in the absence of Mr. Kearns from April 8 to April 14, inclusive.

Three CCC enrollees worked in the Museum until April 8, when Robert Whales was transferred to the Paint Shop. During the rest of the month Lewis Kavurnik and Thomas Parnecke continued work in the Museum.

Respectfully submitted,

C. Max Bauer
Park Naturalist

CMB:ch
CC Director
Dr. Bumpus
Dr. Russell
Mr. Hall
Museum

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REPORT OF THE NATURALIST DEPARTMENT

For

MAY, 1936

I. GENERAL ACTIVITIES

A. Public Contact

Visitors: Since the month of May was exceptionally warm and the roads were cleared sooner than expected, the traffic has been very great. Since May 15 permits have been sold at the North and West Gates, and many of these visitors expect to see the museums and other things of interest. However, our personnel is not large enough to permit us to open the museums during May.

There seems to be more pre-season visitors every year and it is hoped that this demand by the public for earlier facilities in Yellowstone may be at least partly met by putting ranger naturalists and temporary rangers into the Park at least two weeks earlier than has been the rule in the past.

Many of these parties of visitors, drifting around in the Park before the areas are properly supervised, fail to receive instruction or information and it is believed that they commit more minor offenses and depredations than the many thousands of visitors who come during the principal part of the season.

It is hoped this condition may be remedied by increasing the temporary personnel, or at least lengthening the period of time which they serve.

Lectures: Lectures were given by Park Naturalist Bauer in Billings, Montana to the following groups: Kiwanis Club, Lions Club, Masonic Lodge, high school biology classes, Garden Club, and Montana Normal School to a total of 800 persons.

Several lectures were given to CCC camps by members of the Naturalist Department.

B. Ranger Naturalists

Several memoranda for the Ranger Naturalists were prepared during the month and plans were made for the station assignments and for the pre-season trip.

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II. [illegible]

A. Administration

Park Naturalist Bauer supervised the work of the Department and completed the manuscript and sketches for "Trailside Notes, No. 2" and they have been sent to the W. H. Kistler Company of Denver for printing. Five thousand copies have been ordered as this was the approximate number sold of our "Trailside Notes, No. 1" last season. The cost of this printing is borne by the Yellowstone Library and Museum Association.

The Park Naturalist had frequent conferences with Acting Superintendent Emmert and Acting Chief Ranger Lemons in preparation for the season's activities. He also attended most of the sessions of the Ranger Conference and took part in some of the discussions.

Park Naturalist Bauer also spent from May 4 to May 7 inclusive in Billings, Montana contacting various groups and lecturing to clubs, schools, etc.

Assistant Naturalist Crowe and Junior Naturalist Kearns also attended most of the sessions of the Ranger Conference.

Assistant Naturalist Crowe began checking up on the museum after the middle of the month and making preparations for the opening of each one and supervising the work of refinishing some of the floors. He also supervised the work of three CCC enrollees in preparation of labels, materials, etc. for museum exhibits. The work on preparing and classifying lantern slides was also carried on. He also visited the Mammoth Hot Springs terraces several times and made the usual report on thermal activity.

Junior Naturalist Kearns made nine field trips during the month, securing pictures--both movies and stills--making bird observations, and assisting the Ranger Department in studying the Trumpeter Swan situation at Swan Lake where some predatory control is being practiced. He also edited approximately 1,000 feet of movie film which is being sent to the Eastman Kodak Company for duplicate prints. He also carried on most of the work in connection with the sales publications and association matters and in supervising the preparation of the next issue of Nature Notes. In addition to the

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above, he devoted six days to illustrating the Superintendent's Annual Report and obtaining information for the Director on entrance fees. He is also planning a fungi exhibit for the museum for which materials are available but installation is not yet complete.

Miss Catharine Harris, clerk-stenographer, carried on the regular duties of this position and in addition did a great deal of stenographing for the other departments. While one of the other clerks was absent she also worked for the Superintendent's office for several days. In addition to the above, Miss Harris has been working on the library a number of days, placing the books in proper position on the shelves in preparation of a new shelf list.

B. Nature Notes

The May-June issue of Nature Notes is in the process of preparation. The subject matter will be on birds. It is hoped that this will be ready to mimeograph within a week.

C. Library

Books in circulation.....	79
Books received during May.....	7
Magazines and pamphlets in circulation.....	15
Magazines received during May.....	19
Pamphlets received during May.....	39

Several days were spent in arranging the library shelves in proper order and the preparation of a new shelf list was started.

D. Museums

Assistant Naturalist Crowe is preparing historical exhibits for one case at Mammoth and one case at Madison Junction. Junior Naturalist Emerne is preparing a fossil exhibit for a case at Mammoth.

E. Equipment

During the month a fireproof safe cabinet was received and the museum pictures were placed in it. This safe cabinet

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is of Class B construction and will be large enough to take care of all of these pictures and many others of considerable value.

F. Photographs

Negatives filed	36
Negatives in use	47
Prints sent out	[illegible]
Prints received	[illegible]

G. Lantern Slides

Slides used	240
Movie film used	2000 feet

The 2000 feet of movie film and 80 of the above mentioned slides were used by Park Naturalist [illegible] during his lecture trip to Billings, Montana early in the month.

H. Publicity Clippings

The newspaper clipping file was kept current during the month. There being [illegible] clippings classified and filed.

I. Thermal Activity

Mammoth Hot Springs
By
[illegible] Naturalist [illegible]

Angel Spring shows no appreciable change from April. The greatest flow continues from the new outlet to the north.

Baby Spring has increased it flow greatly [illegible] during May.

Blue Spring - The flow has spread over a wider area and a portion of this water is covering [illegible] to the north.

*Correction - Last month the report for Blue Spring was titled Baby Spring.

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PICTURES SHOWING RAPID DEPOSITION OF TRAVERTINE
at
Mammoth Hot Springs

OPAL HOT SPRING TERRACE - Beginning of flow after many years of inactivity. In the center, fresh travertine is covering old formations. Photo taken May 5, 1933 by O. Crowe.

OPAL HOT SPRING TERRACE showing deposition of travertine--two and one half feet in thickness in three years. Photo taken May 5, 1936 by O. Crowe.

Cleopatra Spring - no change.

Cupid's Spring - The heavy flow of agril continues and travertine depositions are building up beautiful formations on the lower slope.

Lyman Spring is inactive.

Highland Spring is inactive.

Jupiter Spring is inactive.

Main Spring - slight flow.

Emerald Spring shows a little increase in flow for the month.

Roiled Spring has increased during May.

Opal Spring is still flowing strong and is one of the most beautifully colored formations in the area. Two pictures of Opal Terrace taken from the same point are attached to this report to show the rapid deposition of travertine during the past three years.

Orange Spring Mound shows no change.

Palette Spring shows no change.

Prospect Spring has decreased slightly.

Emerald Basin Spring is still flowing about as it [illegible].

Upper Geyser Basin
by
Ranger Verde Watson

During the early part of the month activity in the Old Faithful area was about average.

Grand Geyser - On May 16, 17, and 18 the Grand Geyser erupted each day about noon with a very spectacular eruption on Sunday, May 17.

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10314-11 Kearns

Ice Jam at Steamboat Point with ice breaking up on Yellowstone Lake on May 18, 1936.

10314-12 Kearns

District Ranger Frank Anderson on ice piled against the shore at Steamboat Point to a height of 25 feet.

10615-1 Learns

Ice Jam at Fishing Bridge on May 19, 1936. Ice cakes about six inches in thickness.

10615-2 Learns

Ice flow in Yellowstone River immediately above the Fishing Bridge on May 19, 1936. (The ice was entirely out of the lake the morning of May 20th.)

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Giant Geyser was observed in eruption on May 14 and again on May 31.

Cliff Geyser, located in Black Sand Basin, played on May 31 for a period of at least two hours and to a height exceeding fifty feet.

Handkerchief Pool - On May 14 Junior Naturalist Kearns found that the Handkerchief Pool was active again but did not return linen to the surface. Although it would rapidly take it down, it never quite brought it back to the surface. On May 31 the Pool was performing as of old and although a bit slow, returned the handkerchiefs to the surface.

Beehive Geyser - On May 31 at 1:00 p.m. the beehive was observed in eruption, throwing water to the highest point seen during the past months.

J. Personnel

Park Naturalist Bauer was on duty all month.

Assistant Naturalist Crowe was on duty all month except one-half day of annual leave.

Junior Naturalist Kearns was on duty all month except three-fourths of a day of annual leave.

Permanent clerk-stenographer, Miss Harris, was on duty all month.

Three CCC enrollees, Lewis [illegible], [illegible], and William Sushko assisted in Museum work during the month.

Respectfully submitted,

C. Max Bauer

C. Max Bauer
Park Naturalist

CMB:ch
cc Director
Dr. Bumpus
Dr. Russell
Mr. Hall
Museum ✓

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YELLOWSTONE PARK, WYOMING

REPORT OF THE NATURALIST DEPARTMENT
for
1936

I. CURRENT OPERATIONS

A. Public Contact

Visitors: The number of preseason visitors was greater than usual this season. It is hoped that the period of service for Ranger Naturalists may be extended from 90 days to about 105 days per season so that preseason and postseason travel may be more adequately cared for.

Special visitors included the following:

June 7 - Mr. and Mrs. Howard Stagner. Mr. Stagner is Park Naturalist of Grand Teton National Park.

June 19 - Dr. Arthur L. Day, Director of the Geophysical Laboratory, Carnegie Institution, Washington, D. C. Dr. Day remained in the Park until June 25.

June 12 to June 21 - Dr. Frank Swansea Croyin, member of the Geological Survey of Belgium, Brussels, Belgium.

June 23 - Dr. Asper S. Larsen, Professor of Geology from Harvard University.

June 25 - Dr. Alfani of Florence, Italy, representative of the Department of Agriculture.

June 26 - Dr. William Taylor Thom, Professor of Geology, Princeton University.

June 26 - Mr. Erzebet Kol, specialist on snow algae, from Hungary.

June 26 - Mr. Ellsworth Dent, Chief of the Moving Pictures Laboratory, Washington, D. C.

Lectures: The regular lectures of the Ranger Naturalists and Naturalist staff began at the various points on the Grand Loop on June 16. One lecture was given outside the Park by Junior Naturalist Kearns on June 11 at the state meeting of the P. E. O. at Livingston. There were 250 present.

B. Ranger Naturalists

This season nineteen Ranger Naturalists will be employed, fourteen of whom have had previous experience in Yellowstone and five are new men. It appears that the new men are better than usual and therefore, the season should be successful from the standpoint of personnel.

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II. PERMANENT PROJECTS

A. Administration

Park Naturalist Bauer supervised the work of the Department, which included mainly preparation for the season and conducting the preseason trip of Ranger Naturalists and temporary Rangers.

A trip to the Crow Indian Reservation, at the request of Secretary Ickes, which began on Saturday, June 20, and extended to Wednesday evening, June 24, was made by the Park Naturalist. The trip was for the purpose of advising the Superintendent of the Crow Indian Reservation on the possibilities of gold deposits in the Big Horn Canyon and the drilling of a gas well near the Crow Agency.

A conference was held on June 25 with members of the Princeton Geological Field School at Red Lodge. It is the plan of the Field School to organize a Yellowstone-Bear Tooth Research Association consisting of about 35 interested scientists and the Park Naturalist has been invited to join this Association. The Field School now has a camp of their own five miles south of Red Lodge. The camp is financed by the Princeton Geological Society and the management will be under the Yellowstone-Bear Tooth Research Association. Dr. N. M. Fenneman of Cincinnati University is President; Dr. Rollin T. Chamberlin of Chicago University, Vice-President; Dr. W. T. Thom, Jr., of Princeton University, Secretary; and Dr. John T. Rouse of Hamilton College, Treasurer. As a result of six or seven seasons of field work in this region, members of the Research Association are now prepared to write papers on the results of their work.

It is advisable to mention also that Arthur D. Howard, who has spent five seasons in Yellowstone National Park on research work in the Grand Canyon region, has prepared a thesis of about 150 pages which he has submitted to the Geological Society of America for publication. Dr. Howard has had the support and approval of the International Field School of Geology, sponsored by Princeton, which will hereafter be known as the Yellowstone-Bear Tooth Research Association. Dr. Howard is now in the Park carrying on geological research, especially as it relates to the general history of the Park area.

Preliminary plans for a new general museum at Mammoth Hot Springs were made on June 26 and 27 in order to give estimated space and cost figures.

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A. Administration

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Assistant Park Naturalist Crowe carried out a lot of details in connection with the preparation for the coming season and supervised the preparation of quarters for Ranger Naturalists. The opening of the museum, and the installation of a history case at the Madison Museum. He also assisted in the preseason trip and in supervising the work of the Naturalists as they went on their station assignments. He has also prepared a statement on the hot spring activity at Mammoth and prepared the mailing list for Nature Notes.

Junior Naturalist Kearns assisted in editing the Nature Notes and prepared the drawings for the May-June issue. During the month he made four special field trips to photograph animals and birds. Among the photographs secured are those of a Blue Heron rookery, pelicans, gulls, Terns, and Cormorants of the Molly Island area, Trumpeter Swans with Cygnets and also pictures of Antelope kids. His work in photography has been exceptionally worth while. He also assisted in the preseason trip, prepared an exhibit on Fossil for the Mammoth Museum, and has handled the sales publications which involves the ordering, receiving, and checking of books and their distribution to the various information desks. In addition to the above, considerable correspondence was carried on for the Yellowstone Library and Museum Association, movie film was edited, and a relief schedule carried out in which both Messrs. Crowe and Kearns participated.

Miss Catharine Harris, clerk-stenographer, carried on the regular duties of the position and in addition did some mimeographing for the other departments during the first two weeks of the month. Since that time she has been doing the office work of the Naturalist Department which includes the gathering and preparing of statistics, reports, etc. The library shelf list was completed during the month by her.

On June 22, U. S. Commissioner Silcox used Miss Harris to report the case of Robert Cowan who was turned over to the District Court on the charge of negligent manslaughter. This occupied one-half day in court and the one-half days in office work in preparation of the testimony.

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B. Nature Notes

The May-June issue of Nature Notes was mimeographed and mailed about June 15. The subject was Birds, and much of the material was of scientific interest.

C. Library

Books in circulation	130
Books received during June	54
Magazines and pamphlets in circulation	21
Magazines received during June	21
Pamphlets received during June	29

The Library shelf list was completed during the month.

D. Museums

The Mammoth Museum was opened on June 6 from 8:00 A. M. to 5:00 P.M. and continued on this schedule until June 16 when it was opened from 8:00 A. M. to 9:00 P.M.

Norris Museum was opened on June 7 from 8:00 A.M. to 5:00 P.M. and continued on this schedule through the month.

Old Faithful Museum was opened on June 8 from 8:00 A. M. to 5:00 P.M. and continued on this schedule until June 16 when it was opened from 8:00 A. M. to 9:00 P.M.

The other museums, Fishing Bridge and Madison, were opened on June 16, the one at Fishing Bridge from 8:00 A. M. to 9:00 p.M. and the one at Madison Junction from 8:00 A. M. to 5:00 P. M.

A museum case at Madison Museum has been partially installed by Assistant Naturalist Crowe. A museum case at Mammoth on Fungi has been installed by Junior Naturalist Kearns assisted by Ranger Naturalist Robert Fowler.

E. Equipment

No equipment was received during the month of June.

F. Photographs

Negatives received	55
Negatives in use	52

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Prints sent out..... 37
Prints received..... 87

G. Lantern Slides

New slides received..... 50
Slides loaned to Old Faithful Museum.....135
Slides loaned to Fishing Bridge Museum.....120
Slides loaned to Canyon Station.....110
Slides loaned to Mammoth Museum.....150

H. Publicity Clippings

Clippings filed.....400

I. Thermal Activity

Mammoth Hot Springs
by
Assistant Naturalist Crowe

Angel Spring continues as in May with the heaviest flow on the north portion of the terrace covering the old Nature Trail.

Baby Spring has increased in flow and two new outlets are bubbling up close to the old outlet.

Blue Spring has a very heavy flow over the basins to the south and east. The east flow is showing on the slopes of Jupiter Terrace in a few places.

Cleopatra Spring shows a slight increase for the month.

Cupid's Spring - the original spring has almost ceased flowing but a heavier flow is noticeable on the slopes below, filling a pool ten feet in diameter at the bottom of the slope.

Hymen Spring remains inactive.

Highland Spring is inactive.

Jupiter Spring is inactive.

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Kearns

Trumpeter Swans with seven Cygnets on Trumpeter Lake on June 22, 1936.

Bauer

Superintendent Edmund B. Rogers with party of officials at the Madison Junction Museum. Left to right: Robinson, Hill, Emert, Superintendent Rogers, Lord, and LaNoue.

Kearns

Temporary Rangers and Ranger Naturalists in the Norris Geyser Basin while on Pre-Season Trip on June 13.

Kearns

Temporary Rangers and Ranger Naturalists at the Paint Pots at West Thumb discussing thermal phenomena on June 14, while on the Pre-Season Trip.

Main Spring shows a slight seepage.

Mound Spring is increasing.

Naiad Spring is still increasing.

Opal Spring continues with a heavy flow, as in May. This spring is attracting the attention of the visitors with its beauty.

Orange Spring Mound shows no change.

Prospect Spring is flowing heavily to the north, the overflow extending down the slope below Minerva.

West Thumb Area
by
Assistant Naturalist Crowe

Lakeshore Geyser resumed activity the last of the month, after the lake level had dropped below the level of the geyser tube. The high water level had flooded the geyser tube with cold water earlier in the month.

Norris Geyser Basin
by
Ranger Naturalist Fix

Valentine Geyser has been playing with intervals from 14 to 19½ hours. This geyser seems to erupt in a sort of cycle--it first being 19½ hours between eruptions and then 14 hours and then 19½ hours again. A preliminary estimate of the amount of water thrown out in each eruption is about 15,000 gallons.

Ebony Geyser has been erupting at night, approximately once every 24 hours for about 5 minutes. Occasionally, it erupts twice in 24 hours.

The New Geyser (called Crystal Geyser rather than the Whirligig so as not to confuse it with Whirligig) reaches a height of about 25 feet and is quite active. It is located about 20 feet south of Whirligig Geyser which is drained and quite inactive this season.

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Constant Geyser is inactive [illegible] only once or twice this season.

Steamboat Geyser, along the trail back of the [illegible], has the usual interval of 20 to 25 minutes.

Upper Geyser Basin
by
Ranger Naturalist Griswold

Lehive Geyser played on May 31 at midday. The eruption was witnessed by Ranger James Hamilton.

Butterfly Spring - This feature is furnishing an interesting contrast with last year. It is erupting several times a day to a height of six to ten feet. So far as I can determine, Butterfly Spring has never been known to have erupted before. The duration of play is about 15 minutes.

Bijou Geyser is in eruption most of the time.

Biscuit Basin

Sapphire Pool is acting normally, erupting about every 12 minutes to a height of four to six feet.

Jewel Geyser - There is no noticeable change in the Jewel eruption except that on the Auto Caravan today I noticed more runoff than at any time last year on the side toward the trail. The eruption today was also higher than any I witnessed last year--two spurts reaching about 50 feet in height. The interval remains about four or five minutes.

Chain Lake Geyser is reported by Ranger Naturalist Douglass to be erupting at quite frequent intervals, throwing out a considerable volume of water to a height of about 50 feet. This is across the Firehole River from the Fan Geyser.

Castle Geyser is erupting with about one day intervals. The height is about 75 feet and the duration of water eruption about 30 minutes, followed by steam for one hour.

Daisy Geyser seems to be erupting at an interval more nearly two hours than the interval of 90 minutes which was

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used last year. This lengthening in interval may be due, however, to the fact that we have had several days more windy than usual. On June 18, the Auto Caravan waited 70 minutes after the first overflow until the eruption. Normally, the eruption follows the first overflow in about 30 minutes.

Giant Geyser erupted at 10:15 A.M. on May 31 and was witnessed by Ranger James Hamilton. The Giant erupted again on June 12 at 3:45 P.M. It has not been observed in eruption since that time, the present interval being 19 days.

Grand Geyser has been erupting at about 48 hour intervals. The two eruptions I have witnessed have had only five spurts each, but these were of normal height.

Lion Geyser has been playing frequently. It has been observed nearly every day and on some days two or three times.

Old Faithful has set a new long and short interval record, the long interval being 82 minutes and the short interval 30 minutes.

Riverside Geyser seems to be erupting very regularly at about three eruptions per 24 hours.

Castle Geyser is erupting frequently to its normal height and duration.

Splendid Geyser has not been observed in eruption this year.

I. Personnel

Park Naturalist Bauer was on duty all month.
Assistant Park Naturalist Crowe was on duty all month except 1½ days of annual leave.
Junior Park Naturalist Kearns was on duty all month.
Permanent clerk-stenographer Miss Harris was on duty all month.

The following is a list of the Ranger naturalists and the time of service:

Philip Fix, June 5 to the end of the month.
Jennings King, June 6 to the end of the month.

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Robert L. Fowler, June 9 to the end of the month.
Theodore R. Robb, June 9 to the end of the month.
Arthur Nash, June 10 to the end of the month.
Harry R. Woodward, June 16 to the end of the month.
H. E. Stork, June 16 to the end of the month.
Lloyd Sweetman, June 16 to the end of the month.
Robert C. Spivey, June 16 to the end of the month.
James R. Simon, June 16 to the end of the month.
Wayne Replogle, June 16 to the end of the month.
John A. Moore, June 16 to the end of the month.
Neil A. Miner, June 16 to the end of the month.
Herbert Lystrup, June 16 to the end of the month.
Myron Griswold, June 16 to the end of the month.
Irwin B. Douglass, June 16 to the end of the month.
Charles R. Hutchins, June 16 to the end of the month.
Truston E. Peery, June 17 to the end of the month.
Richard J. Preston, June 20 to the end of the month.

Laborers employed during the month to care for the Museum and the Museum grounds included the following:

Clyde Stewart, Mammoth Museum, June 5 to the end of the month.
Asco Wampler, Old Faithful Museum, June 6 to the end of the month.
Rose Ingersoll, Fishing Bridge Museum, June 15 to the end of the month.

Two CCC enrollees, Lewis Zaverenik and Thomas Kornecke, worked in the Museum during the entire month. One CCC enrollee, William Cushko, worked in the Museum until June 15.

Ernest Tisdale, geology student-enrollee, arrived on June 18 and has been working under the direction of the Park Naturalist since that time. He is from the University of North Dakota.

Respectfully submitted,

C. Max Bauer
Park Naturalist

CMB:ch
cc Director
Dr. Kumpf
Dr. Russell
Mr. Hall
Museum

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Misc.: Grand View
Artist Point
Game Stalk
Mt. Washburn
Museum Talks
Old Faithful Cone Talks

SUMMARY OF NATURALIST ACTIVITIES

Yellowstone National Park

For month ending June 30, 1936

Place	Field Trips: No.	Field Trips: Attendance	Auto Caravans: No.	Auto Caravans: Cars	Auto Caravans: Attendance	Lectures: No.	Lectures: Attendance	Special Parties: No.	Special Parties: Attendance	Museum: Attendance	Misc. Contacts: No.	Totals: Contacts Made	Publications Distributed: No.	Publications Distributed: $ Sales
Canyon	24	472	14	247	876	14	1 1840	2	140		9643	22,971		
Fishing Bridge	14	217	12	42	161	14	3036	2	5	10220	413	14,052		$ 142.60
Madison						15	393			7233	1354	8,980		
Mammoth	40	1868	29	313	1163	15	1880	3	62	14045		19,018		$ 210.30
Mount Washburn											3880	3,880		
Norris	17	163							81	7682	1762	9,688		
Old Faithful	26	2047	15	542	1724	15	6179	4	45	25723	*37500 508	73,726		$ 334.35
West Thumb	34	1227				14	1261					2,488		
Totals 193	155	5994	70	1144	3924	87	24589	11	333	64903	55060	154,803		$ 687.25
Totals 193	186	5967	37	525	1826	157	25802	12	409	44895	8986	87,885		$ 395.00

* Under Miscellaneous Contacts for Old Faithful, the figure, 37,500, represents the attendance at the Cone Talks at Old Faithful Geyser. It is estimated on this report; however an actual count will be taken beginning July 1st.

Park Visitors During Period: 38,668

Signed: Ruax Bauer,
Park Naturalist

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[illegible]

Summary Report July 1, 1935 to June 30, 1936

To the three permanent members of the staff as listed last year we have added a permanent clerk-stenographer, beginning November 15, 1935. Therefore, the permanent staff consisted of:

Park Naturalist	C. Max Bauer
Assistant Park Naturalist	George C. Crowe
Junior Park Naturalist	William E. Kearns
Clerk-stenographer	Catharine Harris

The summer staff for the last part of the 1935 season consisted of nineteen ranger naturalists, one clerk-stenographer, and three laborers or museum caretakers. This same number of ranger naturalists and laborers were taken up again in June of this year, 1936. Since obtaining the services of a permanent clerk-stenographer it was not necessary to add a temporary clerk-stenographer for this season.

It is highly desirable to have more ranger naturalists for the work of the Naturalist Department during the summer season, and equally as important to extend the time of temporary employees from 90 days to 105 days so that the pre-season travel which begins in May and the post-season travel which continues on into October can, at least, be taken care of to an extent that will not bring about the complaints which we have had on the lack of supervision of visitors at these times.

The closing dates of the museums in September, 1935 were as follows:

Madison Museum, September 2
Norris Museum, September 7
Fishing Bridge Museum, September 15
Old Faithful Museum, September 15
Mammoth Museum, September 20

The opening dates for the museums in June of 1936 were as follows:

Mammoth Museum, June 6

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Norris Museum, June 7
Old Faithful Museum, June 8
Fishing Bridge Museum, June 16
Madison Museum, June 16

The daily hours for each museum are as follows:

Mammoth Museum	8:00 a.m. to 8:00 p.m.
Norris Museum	8:00 a.m. to 5:00 p.m.
Madison Museum	8:00 a.m. to 5:00 p.m.
Old Faithful Museum	8:00 a.m. to 9:30 p.m.
Fishing Bridge Museum	8:00 a.m. to 8:00 p.m.

Five outdoor amphitheaters were in use: one at Mammoth Camp Ground which will seat 340; one at Madison Junction Museum which will seat 80; one at Old Faithful Museum which will seat 300; one at West Thumb which will seat 175; and one at the Fishing Bridge Museum which will seat 200. These outdoor amphitheaters are used each evening during the season for campfire talks on natural history and other Yellowstone subjects. Plans for the construction of an outdoor amphitheater at the Canyon Camp Ground have not materialized but it is hoped that this amphitheater will be constructed this season. The campfire lecture at this point is held in the community room of the Ranger Station.

Other activities of the Naturalist Department during the travel season consist of nature walks at each one of the points on the Grand Loop road, given each morning at 8:30; an auto walk at Old Faithful known as the Geyser Hill Walk at 9:30; auto caravans at Mammoth at 9:00 a.m., at Old Faithful at 2:00 p.m., and at Fishing Bridge at 2:00 p.m.; and camp talks each evening at 7:30 at Canyon and Mammoth. Special contacts consist of placing ranger naturalists on duty at two of the points overlooking the Grand Canyon; also the meeting of the busses at Norris, Madison, and West Thumb where short trips are made and talks are given which assist greatly in the service to the visitors. Other special contacts consist of a talk on Old Faithful Geyser at the Old Faithful Geyser cone just previous to each eruption. This talk is from 8 to 10 minutes long and gives the necessary information regarding the geysers, and particularly Old Faithful.

The work of the winter season is largely office and preparatory work, although some trips are made to become familiar with the winter conditions and the condition of wildlife. The office

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work consisted of filing of negatives and photographs, posting of herbarium specimens, classification of specimens, classification and cataloging of library books, accessioning of materials for the museum, the expansion of lantern slide facilities and re-cataloging of our lecture slides, the posting of news clippings, and the printing of labels.

Nature notes were issued throughout the year every second month, making six numbers in all.

One history case and one case on Fungi were installed in the Mammoth Museum and the beginning of an installation on history in a new case at Madison Junction.

The study of Place Names of Yellowstone Park was continued through the winter months with the hope that in a short time the material may be ready for submitting to the U. S. Geographic Board.

The development of pre-season activities for ranger naturalists and temporary rangers has been carried on this year and consisted of a three-day training course on information, rules and regulations in Yellowstone Park, and a trip around the Grand Loop road.

Many contacts were made with conventions and groups of teachers and students by the Naturalist Department.

The development of 16 mm. film of wildlife and birds and also a large number of good still pictures were taken during the year.

Research work was carried on by the permanent naturalists on geology and wildlife and also by the continued work of Arthur Howard of New York University, who has submitted a paper on the Geological History of the Grand Canyon of the Yellowstone to the Geological Society of America, which paper will probably be printed in the Bulletin sometime this fall. A request to have Mr. Howard appointed as a research naturalist has been sent to the Director.

The International Field School of Geology, which is more commonly known as the Princeton School of Field Geology has not been

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placed on a fairly permanent basis. This field school is for the training of students and the development of research in geology in the Yellowstone-Bear Tooth region. The financial support of the school is now placed in the hands of the Princeton Geological Association and the research activities are in the hands of the Yellowstone-Bear Tooth Research Association of which the Park Naturalist is a member.

Trailside Notes No. 3, from Fishing Bridge through Canyon and Lower Falls to Tower, was prepared this year and printed by the Yellowstone Library and Museum Association. Also a concise statement of the activities of the Yellowstone Library and Museum Association for the last three years consisting of a bulletin of 24 pages was prepared and printed by the Yellowstone library and museum association. This booklet also contains the membership list, constitution and by-laws of the association and was mailed out to the members, about 400 copies having been distributed.

During the winter season the permanent staff gave a series of lectures on the National Parks and also directed the preparation of a series of lectures on the Conservation of our natural resources, which series of lectures were given to members of the CCC camp, 801, Yellowstone National Park. This series of talks on the various natural resources of the United States was enthusiastically received, especially by the CCC and CCC personnel interested in educational activities. This series of lectures was mimeographed and bound.

Each member of the permanent Naturalist staff made a week's trip during the winter season to contact schools and other organizations and deliver talks on Yellowstone National Park.

Two to three CCC enrollees have been used throughout the year in museum work of one sort or another. Special attention has been paid to the training of these boys for some particular line of work. During the latter part of the 1935 travel season two student enrollees (geologists), Johnson and Ocebal, derived considerable benefit from the study of geological problems in Yellowstone, and in turn contributed considerably in the way of collecting and preparation of materials for the museum. In June, 1936 another geological student was assigned to the Naturalist Department. His name is Ernest Pimsler. Up to the present time his

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assignments have been in the nature of familiarizing himself with the geology of the Yellowstone region. Several projects have been laid out for him so that it is quite certain that the annual benefit of this arrangement will be very satisfactory.

A table showing the naturalist department activities from July 1, 1936 to June 30, 1938 is contained on the following page.

Respectfully submitted,

C. Max Bauer
Park Naturalist

CMB:ch
cc Director
Demaray
Russell
Hall
Vanouse

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NATURALIST DEPARTMENT

Activities from July 1, 1935 to June 30, 1936, inclusive

Place	Field Trips		Auto Caravans			Lectures		Museum	Sp. Parties		Misc.
	No.	Att.	No.	Cars	Att.	No.	Att.	Att.	No.	Att.	
Canyon	164	4544	14	247	276	162	72283		8	1361	76031
Fishing Bridge	78	5246	74	1272	4436	91	44267	61827	13	1632	1351
Madison						346	14316	47078	34	1247	1354
Mammoth	179	17977	103	1723	3417	91	17428	98209	18	1085	5048
Mt. Washburn											26477
Norris	310	11256						54337	5	81	1762
Old Faithful	179	17918	92	3487	11183	167	153285	165487	46	3871	38786
West Thumb	218	15048				76	8904				
TOTAL	1128	69983	283	6529	21912	933	310543	426938	122	9297	150809

TOTAL CONTACTS, July 1, 1934 to June 30, 1935, inclusive 756,415
TOTAL CONTACTS, July 1, 1935 to June 30, 1936, inclusive 889,482

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[illegible]
for
[illegible]

1. [illegible]

[illegible]. [illegible]

Visitors: This season purports to be the largest in point of attendance in the history of Yellowstone up to the present time. On July 4th the entrance of visitors amounted to 1[illegible],141. Contacts for the Naturalist Department mounted to unheard of numbers.

Special visitors include the following:

July 1 - Dr. [illegible]ller, Assistant Surgeon [illegible], [illegible] Public Health Service

July 4 and 5 - Ned J. Burns, Acting Chief Museum Division, [illegible]

July 7 - Professor Arthur T. Evans and Botany class.

July 1[illegible] - Dr. Adolph Murie, Regional Wildlife Technician, [illegible]

July 1[illegible] - Mrs. Rose Taylor, historian of [illegible], California, formerly attached to National Park Service, Yosemite.

July 1[illegible] to 17 - [illegible], [illegible] Park Service, and family visit Yellowstone

July 13 - Dr. Haas, U. S. Bureau of Public Health

July 15 - Professor [illegible] Schlundt, Head, Department of Chemistry, Missouri University.

July 18 and 19 - Wallace [illegible] Stewart, Jr., Assistant Professor of Geography, Clark University.

July 20 - William [illegible], Nationally known Oil Geologist.

July 2[illegible] - Professor John [illegible] Scott, Geology Department, University of Wyoming.

July 2[illegible] - Mr. Mattingly, Bureau of Budget.

July 2[illegible] - Thomas Stewart, Portsmouth, Virginia, former Ranger Naturalist.

July 25 - C.H. [illegible], Regional Geologist, [illegible].

July 27 - Delmer Powers, Chief Geologist, Continental Oil Co.

July 28 to 30 - Dean and Mrs. George T. [illegible], Iowa University

July 28 - Henry Pollman, JunctionCity, Kansas, Soldier in Park in 1[illegible].

July 29 - Roger [illegible], Geologist with Emerada Petroleum Corp.

July 2[illegible] - [illegible], Architect, [illegible], Berkeley, California.

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and approximately [illegible] for [illegible], Regional Geologist, [illegible].

B. Nature Notes

Plans for the July-August issue of Nature Notes have been made but the material has not been edited and some of it has not been written. The subject for the next issue will be "The Summer Activities of the Yellowstone Park Staff.

C. Library

Books in circulation.....[illegible]
Books received during July..... [illegible]
Magazines and pamphlets in circulation..... [illegible]
Magazines received during July..... [illegible]
Pamphlets received during July..... 44

D. Museum

The usual daily museum schedule was carried on throughout the month.

Approximately one week was spent by Miss Harris during the month on accessioning and cataloging museum materials.

E. Equipment

No new equipment was received during the month of July.

F. Photographs

Negatives received..... [illegible]
Negatives in use..... [illegible]
Prints sent out..... [illegible]
Prints received..... [illegible]

G. Lantern Slides

Slides in use at various stations.....[illegible]

H. Publicity Clippings

Clipping files.....[illegible]

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10519-1 Kearns

Nest and egg of Caspian Tern on Molly Island in Yellowstone Lake.

10519-2 Kearns

Caspian Tern young "playing dead" while being photographed on nest on Molly Island in Yellowstone Lake.

[illegible] [illegible]

Young Cormorant on nest on Holly Island in Yellowstone Lake.

[illegible] [illegible]

Three young Cormorants on nest on Holly Island in Yellowstone Lake.

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I. Thermal Activity

Mammoth Hot Springs
by
Assistant Naturalist Crowe

Nagel Spring - The new spring reported in January is flowing heavily. The outlet to the south, most active in 1933, 1934, and 1935 has increased in flow this month.

Baby Spring - The flow has been constant and is shifting to the south on this formation.

Blue Spring almost ceased flowing about the [illegible] and has returned slowly to the normal flow.

Cleopatra Spring shows no change during the month.

Cupid's Spring has decreased in flow more than half.

[illegible] Spring is still inactive.

Jupiter Terrace displays three streams flowing over the east front, with little color in evidence. [illegible] is part of the overflow from Blue Spring.

[illegible] Spring is inactive.

[illegible] Spring is inactive.

Sound Spring continues its constant flow.

Opal Spring has shown no change during the month.

[illegible] Spring Mound shows no change.

Rainbow Spring continues to flow on the west side of the Devil's Thumb. The flow is heavy and covers a wide area.

[illegible] Spring has almost ceased flowing.

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[illegible] is flowing strong. The deposits of travertine are almost high enough on the north to divert the flow to the south toward Blue Spring.

[illegible] shows slight seepage.

[illegible]
by
[illegible]

[illegible] has not been witnessed in eruption.

[illegible] has not been as active as earlier this season and has practically ceased erupting.

[illegible] has continued its activity and has been seen in eruption several times.

Cliff Geyser was witnessed in eruption by the auto caravan on July [illegible].

[illegible] is erupting more frequently than earlier this season, the interval being closer to 90 [illegible] than last month.

[illegible] Four times during July: on the [illegible], [illegible], [illegible], and [illegible]. All of these eruptions were normal in height and duration.

All the other geysers in the Basin have about the same activity as last month.

[illegible]
by
[illegible]

Valentine Geyser shows its usual activity erupting to a height of about [illegible] feet.

[illegible] - On July [illegible] there was a sudden change in the activity of the [illegible]. It [illegible] within eight hours and continued to erupt at quite frequent intervals during the rest of the month, the intervals gradually lengthening, however.

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Whirling Geyser was totally inactive until July 12 when it began erupting once or twice a day. On July 2[illegible] there was a very violent eruption during which there was a great amount of mud and rocks thrown out. Since that time its eruptions have been at very regular intervals - about every six hours.

[illegible] Geyser began on July 12 to erupt several times during the day. This went on for several days and then it [illegible] remainder of the month.

[illegible] are forming very rapidly in the pool.

Jim Bridger Geyser has erupted approximately once every 24 [illegible] rather marked resemblance to [illegible] and has been attracting much attention.

Mow Geyser, first seen last October, is steadily decreasing in activity.

Blue Geyser continues its activity, being one of the most spectacular in the Basin.

[illegible] Basin shows very little change.

[illegible] Dam is very active.

[illegible] Basin in general shows a quite pronounced increase, especially in amount of water, probably due to the heavy rainfall during the month of July.

J. [illegible]

Park Naturalist [illegible] was on duty all month.

Assistant Naturalist [illegible] was on duty all month except one day of annual leave.

Junior Naturalist [illegible] was on duty all month except three-fourths day annual leave on July 7.

Permanent clerk-stenographer [illegible] was on duty all month except one-half day annual leave on July [illegible].

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YELLOWSTONE PARK, WYOMING

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Nineteen Ranger Naturalists were on duty throughout the month.

On July 1, [illegible] naturalist for the National Park Service and is [illegible] research in geology during the summer. His appointment is for the nominal sum of [illegible].

Three laborers, Clyde Stewart, Ross Inverwell, and [illegible] Sampler were on duty all month as caretakers at the museums.

Two CCC enrollees, Louis [illegible] and Thomas [illegible] were on duty all month.

Ernest Findale, geology student-enrollee, was on duty all month.

[illegible],

Omax Bauer

[illegible]
[illegible]

[illegible]:ch
cc Director
Dr. Dumpus
Dr. Russell
Mr. Hall
Museum

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Yellowstone Park, Wyoming

Misc.: Artist Point
Inspiration Point
Museum Talks
Bus Talks
*Old Faithful Geyser Cone Talks
Mt. Washburn
Game Stalk

SUMMARY OF NATURALIST ACTIVITIES

For month ending July 31, 193 6

Yellowstone National Park

Place	Field Trips No.	Field Trips Attendance	Auto Caravans No.	Auto Caravans No. Cars	Auto Caravans Attendance	Lectures No.	Lectures Attendance	Special Parties No.	Special Parties Attendance	Museum Attendance	Miscel. Contacts: No.	Totals Contacts Made	Publications Distributed No.	Publications Distributed $ Sales
Canyon	61	2478	31	864	3093	62	45927	10	532		[illegible]	110,067		
Fishing Bridge	30	955	29	271	1036	31	17626	2	40	38257	3000	60,914		$ 668.55
Madison						25	1315			25539	5078	32,532		
Mammoth	93	6034	61	1553	5704	31	6695	2	90	58001		76,524		$ 676.25
Mount Washburn											13907	13,907		
Norris	38	1893						8	424	27527	14402	44,246		
Old Faithful	62	10529	31	3904	15592	31	27780	9	2224	84365	*137736 6417	288,645		$1528.90
West Thumb	91	5958				29	5424							
Totals 193 6	375	27847	152	6592	23425	209	104767	31	3310	233689	289177	632,215		$2873.70
Totals 193 5	453	32014	93	2550	8379	378	137935	70	5937	153818	42331	380,414		$3040.05

Park Visitors During Period: 165,172

Signed: Orrax Ba
Park Naturalist

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[illegible]

[illegible]

[illegible]

I. [illegible]

A. [illegible]

Visitors:

August 1 to 7 - Mr. and Mrs. [illegible], Chief of the Field Division of Education, National Park Service, Berkeley, California.

August 4 - Mr. J. C. Gueloke, Chairman, State Board of Education, Texas.

August 6 - Professor C. E. Weiss, Geologist, Montana University.

August 7 - Mr. Arno B. Cammerer, Director, National Park Service, Washington, D. C.

August 7 - Miss Isabelle Story, Chief of the Division of Public Relations, National Park Service, Washington, D. C.

August 1[illegible] - Professor [illegible], [illegible], and Professor Charles T. Wilson, Vanderbilt University.

August 15 and 16 - Mr. R. R. Collingwood of American Forests.

August 16 to 17 - Mr. and Mrs. Robert Sterling Yard, National Parks Association and the Wilderness Society.

August [illegible] - Mr. and Mrs. [illegible], Chief of the Detailliferous Section, U. S. Geological Survey.

August [illegible] to [illegible] - [illegible], artist and pioneer photographer, New York City.

August [illegible] to [illegible] - Professor and Mrs. [illegible], Iowa University.

August [illegible] to [illegible] - Mr. and Mrs. [illegible], Financial Secretary, San Francisco Y. M. C. A.

Lectures:

The regular summer schedule of lectures was carried on by the Naturalist Staff during the month.

B. [illegible]

Note the changes in the ranger naturalists as indicated at the end of the report.

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II. [illegible]

A. [illegible]

Park Naturalist Bauer supervised the work of the Naturalist Department during the month. Numerous trips were made to various stations on the loop to inspect the work of the ranger naturalists and to confer with them regarding the improvement of the programs, lectures, etc. Several conferences were held with Superintendent Bauer and other officials during the month. The Park Naturalist usually took part in the campfire programs which he attended, but owing to the large amount of routine work, no regular lecture was delivered during the month.

Assistant Naturalist Crowe and Junior Naturalist Kearns carried on their share of relief work for the ranger naturalists during the month and gave weekly lectures on "Water Conditions" and "Wildlife" at the various stations on the loop. The bear lecture at Canyon was given most of the time by Ranger Naturalist Replogle. However, Ranger Naturalist Preston and Messrs. Crowe and Kearns each gave the bear lecture one day a week. Assistant Naturalist Crowe did a great deal of supervisory work during the month.

Junior Naturalist Kearns carried out the work of handling the sales publications and routine matters connected with it. He also took field trips to Grebe Lake and Trumpeter Lake for observations of swan and wildlife.

Miss Catharine Harris, clerk-stenographer, carried on the regular duties of this position and gave assistance to Mr. Angel Hall for two and one-half days. Much ten days were devoted to the preparation of the final copy of Place Names of Yellowstone National Park.

B. [illegible]

The July-August issue of Nature Notes was completed on the subject of [illegible] during the [illegible], with also an article on the [illegible] of Yellowstone prepared from interviews with Mr. Arthur L. Day, who visited the

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Park in July. The issue was mimeographed and mailed to [illegible] addresses.

C. [illegible]

Books in circulation.....[illegible]
Books [illegible] during August..... 2
Magazines and pamphlets in circulation..... [illegible]
Magazines received during August..... [illegible]
Pamphlets received during August..... [illegible]

D. [illegible]

The usual daily [illegible] out the month.

E. [illegible]

The only new equipment received during the month [illegible] four pencil sharpeners.

F. [illegible]

Negatives received.....[illegible]
Negatives in use..... [illegible]
Prints Sent Out..... 35
Prints [illegible].....[illegible]

G. [illegible]

Slides in use during August.....[illegible]

H. [illegible]

Clippings filed during August.....[illegible]

I. [illegible]

[illegible]

Angel Spring - a colorful display is visible in three areas on the formation. The flow is increasing at the

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outlet on the south and which had been nearly dry for a year.

Baby Spring is now flowing from three outlets close together.

Blue Spring decreased in flow about August 20, but is flowing stronger than in July.

Cleopatra Spring shows no change.

Cupido Spring shows about one-third as much flow as last month.

Green Spring is still inactive.

Jupiter Terrace - Water is flowing down this slope in three places but little color is in evidence.

Pain Spring is still inactive.

Minerva Spring started flowing about the 10th and the pool on top is filled again.

Round Spring - The flow has increased and beautiful formations can be viewed from the highway.

Saint Spring has also increased and the overflow in places is quite noticeable from the highway.

Opal Spring has decreased slightly.

Orange Spring Mound has decreased about twenty five per cent.

Palette Spring is overflowing the path toward Liberty Cap, as several underground drainage channels have filled up.

Sunset Basin Spring shows no change.

Vandalism is quite noticeable at many of the springs and pools, visitors having broken the formations and thrown pieces into the water.

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[illegible]

by

[illegible]

[illegible] for the month of August. However, the geysers in this basin are noted for their irregularity.

Shirligig Geyser, which was quiet during the early part of the season and in a very interesting geyser, finally ceased eruption, as far as can be told for the time being, on August 14. The Ranger and Ranger Naturalist at that point believe that the rocks thrown into the geyser crater have had something to do with the shaking up of the geyser. Several hundred pounds of rock have been taken out of this geyser by these men during the last month, the rocks having been thrown in by [illegible] and [illegible] visitors.

[illegible] Geyser has not erupted during the month.

[illegible] Terrace, toward the east end of the basin, has been very active, more steam and water coming out of the numerous vents on this hill than usual. According to observation, some of these vents are depositing silica at a very rapid rate.

Salesting Geyser, which is the largest in this basin, is believed by Ranger Naturalist Fix to be very regular in its eruptions, with an interval of about [illegible] hours. Occasionally however, it misses an eruption entirely, but this does not seem to affect its regularity as it picks up the next day at the usual time. The height of eruption is from [illegible] to [illegible] feet.

Steamboat Geyser, south of the Museum, for a time known as [illegible] Geyser, is more active, erupting [illegible] eight or ten minutes to a height of [illegible] feet and expelling a great deal of water.

Most of the small geysers, such as Vixen, Fearless, Corporal, and Veteran are behaving as usual.

In the south part of the basin considerable cinter is being deposited, whereas in the north part some of the geysers do not appear to be depositing any silica at all.

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Upper Geyser Basin
by
Ranger Naturalist Griswold

Artemesia Geyser was witnessed in eruption only once during the month, on August 30. The maximum height was about 20 feet.

Beehive Geyser has not been observed in eruption this season.

Butterfly Spring has not been seen in eruption this month.

Chain Lake Geyser has continued its unusual activity and a complete eruption was witnessed by Dr. Douglass and myself on August 30. The estimated height was 60 feet and the duration about 60 to 90 seconds. The play is extremely beautiful and spectacular.

Cliff Geyser was witnessed in eruption once during the month.

Fan and Porter Geysers played on August 20.

Giant Geyser played on August 6, 17, and 24. Each eruption was normal in height and duration.

Handkerchief Pool has been more full than usual during the last half of the month. On two different occasions it has been overflowing but has not displayed the former handkerchief action.

Lion Geyser has been playing frequently and on one occasion had a forty minute interval.

Restless Geyser was observed in eruption by the Auto Caravan group on August 31.

Vault Geyser was unusually active on August 31, playing on several occasions in the morning and afternoon to a height of from ten to fifteen feet.

All other features have been displaying normal activity.

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Misc.: *Old Faithful Cone Talks
Artist Point
Inspiration Point
Grand View
Museum, Bus, and Nature Talks
Mt. Washburn

SUMMARY OF NATURALIST ACTIVITIES

~~SEASON~~
For month ending August 31, 1936

Yellowstone National Park

Place	Field Trips		Auto Caravans			Lectures		Special Parties		Museum	Miscel. Contacts	Totals	Publications Distributed	
	No.	Attendance	No.	No. Cars	Attendance	No.	Attendance	No.	Attendance	Attendance	No.	Contacts Made	No.	$ Sales
Canyon	58	2104	24	457	1613	54	36887	4	59		53737	94,400		
Fishing Bridge	29	845	30	244	859	31	13383			29737	2615	47,439		$ 679.85
Madison						29	1740			26979	5920	34,639		
Mammoth	24	879	31	834	3062	31	6154	1	27	51777	3394	65,293		691.45
Mount Washburn											15116	15,116		
Norris	31	1805						7	305	26808	14334	43,252		
Old Faithful	61	10252	31	2391	7765	31	30125	14	675	91323	*147644 2218	290,002		2107.10
West Thumb	91	7184				31	4438					11,622		
Totals 1936	270	23069	116	3926	13299	207	92727	26	1066	226624	244978	601,763		3478.40
Totals 1935	442	29588	93	2581	8793	375	132301	31	2411	181403	45074	399,570		3124.25

Park Visitors During Period: 142,648

Signed: Orrax Bauer
Park Naturalist

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On September 14, Mr. Crowe gave a short talk to the pupils of the Mammoth school.

On September [illegible], Mr. Crowe gave a talk on the "History of Yellowstone" at the Canyon CCC Camp - 100 present.

[illegible]

A number of letters have been received commending the work of the summer staff. Note the termination dates of the Ranger Naturalists as indicated at the end of the report.

II. [illegible]

[illegible]

Park Naturalist Dauer directed the various activities of the Naturalist Department during the month. A number of trips were made to the various stations in connection with the departure of the Ranger Naturalists, and the closing of programs and museums. Several conferences were held with Superintendent Rogers and other officials. Mr. Dauer also conferred with Mr. Neil Miner a number of times regarding the glacial geology of the Mammoth region and accompanied him in the field on several occasions. From September 9 to 11, Mr. Dauer made a trip to the Thorofare Ranger Station, and pictures taken on this trip are attached to this report. Mr. Dauer spent a portion of two days conducting Mr. Harry Sargent of the U. S. G. S. about the Park. He also spent a day with Mr. and Mrs. [illegible].

Assistant Naturalist Crowe was on duty at [illegible] from the [illegible] to 14th, taking the place of a temporary [illegible] on the regular program. He also checked in and stored all equipment and prepared the various cottages and museums for the winter. Mr. Crowe also conducted special walks at [illegible] Faithful for the New York Life Insurance Company Agents, [illegible] in number, and the Passenger Agents Tour of [illegible]. He also supervised the filing of photographs and [illegible] slogan.

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Junior Naturalist [illegible] checked in all unsold publications, stored some and [illegible] the [illegible] work on the final [illegible] of [illegible]. From September [illegible], [illegible], he directed the regular program at Fishing Bridge Museum. Seven field [illegible] were made for observations and pictures of wildlife and scenic subjects. Mr. [illegible] [illegible] Mr. and Mrs. [illegible] Hubbard of the National Geographic Society over the Mammoth Hot Springs Terraces. He began the assembling and editing of articles for Nature Notes. He also prepared a fine pair of moose antlers for the Museum.

Miss Catharine Harris, clerk-stenographer, carried on the regular duties of the position and gave assistance for one and one-half days to Mr. Dorr Yeager, Field Naturalist of the Berkeley Office. Considerable time was also spent in preparing the Place Names and maps to be sent to the Washington Office.

E. [illegible]

Material is in the course of preparation for the September-October issue of Yellowstone Nature Notes. Many requests for Nature Notes have been received.

C. LIBRARY

Books in circulation	[illegible]
Books received during September	[illegible]
Magazines and pamphlets in circulation	[illegible]
Magazines received during September	[illegible]
Pamphlets received during September	[illegible]

D. [illegible]

The regular daily museum schedules were continued up to the official closing of the park. All Fairyful Museums remained open throughout the month, as the District Ranger and one temporary Ranger continued their office during the month. A number of minor repairs were made prior to preparing the museums for the winter.

The two exhibit [illegible], [illegible] and [illegible], were returned in good condition from the San Diego Exposition by Mr. [illegible]

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Hall, who was in charge of the National Park Service exhibits there.

[illegible]

No new equipment was received during the month. All tents and [illegible] were stored. The [illegible] motion picture screen was brought in from Canyon for use at the Mammoth [illegible].

[illegible]

Negatives received and filed.....	[illegible]
Negatives in use.....	147
Prints received and filed.....	[illegible]

[illegible]

The [illegible] lantern slides in use during the summer have been checked in and filed.

[illegible]

Clippings classified and filed during month... [illegible]

I. [illegible]

Mammoth Hot Springs by Assistant Naturalist Brown

[illegible] - The heavy flow from the new outlet continued as in August. The flow over the south portion of the terrace [illegible].

[illegible] - It is still flowing from three small outlets and the spread over a [illegible] to the west.

[illegible] shows no change to the south, but on the west side of this area water is flowing from numerous small outlets.

[illegible] shows no change.

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Tellowstone lake, looking [illegible] across [illegible] from high ridge above Gabil Creek. [illegible]

Turret Mountain on right; Table Mountain in middle distance, looking northeast from Trapper's Creek.

Photo by [illegible]

Colter Peak, [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]
[illegible] Cabin [illegible]

The end of the south ridge of the Trident, looking west from Thorofare Creek. Photo by Lucas

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Cupid Spring has [illegible] showing in three spots on top of the formation.

Hymen Spring is still inactive.

Jupiter Terrace shows no change.

Main Spring has revived on the east end.

Minerva Spring is overflowing its slopes as it activity increases.

Green Spring has increased [illegible] its lower slopes. It is overflowing [illegible]

Naiad Spring shows increase of flow with three streams overflowing the formation.

Opal Spring has decreased at least a third of the flow as in August.

Orange Spring Mound shows no change.

Palette Spring - The overflow is spreading over a wide area between Liberty Cap and Hymen Terrace.

Summit Basin Spring has decreased sufficiently to lower the water level about two inches in the large pool.

The building of new walks over this area is greatly needed before the season of 1937.

The new parking area at Liberty Cap was a big improvement in handling the heavy traffic at this point. The area was filled with automobiles throughout daylight hours during the heaviest travel.

J. [illegible]

Park Naturalist Bauer was on duty all month.
Assistant Naturalist Crane was on leave one-half day.
Junior Naturalist Kearns was on leave one and one-eighth days.

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Clerk-stenographer Miss Harris was on duty all month.

The Ranger Naturalists were on duty during the month [illegible]:

Harry Woodward, up to and including September [illegible].
Herbert Lystrup, up to and including September [illegible].
James [illegible], up to and including September [illegible].
[illegible], up to and including September [illegible].
John Moore, up to and including September 7.
Richard Preston, up to and including September 7.
Myron Griswold, up to and including September [illegible].
Irwin Douglass, up to and including September [illegible].
Arthur Nash, up to and including September [illegible].
Robert Spivey, up to and including September [illegible].
Neil Miner, up to and including September 13.
Charles Hutchins, up to and including September [illegible].

Three laborers, Clyde Stewart, [illegible] Ingersoll, [illegible] were on duty through September [illegible] at the Museums.

CCC enrollees: Lewis Laverenik was away ten days [illegible] leave and [illegible] September [illegible].

Mr. Neil Miner, Ranger Naturalist from the University of Iowa, remained in the Park until September [illegible] and completed the field work for his [illegible] the Mammoth Region."

Respectfully submitted,

George C. Crowe

George C. Crowe
Assistant Naturalist

[illegible]
cc [illegible]
[illegible]
[illegible]
[illegible]
[illegible] ✓

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**Bus crowd at Mammoth
Museum, Sept. 14

Misc.: *Old Faithful Cone Talks
Mt. Washburn
Artist Point
Grand View
Museum, Bus, and Nature Talks
Game Stalk

SUMMARY OF NATURALIST ACTIVITIES

~~week~~
For month ending Sept. 30, 1936
~~season~~

Yellowstone National Park

Place	Field Trips No.	Field Trips Attendance	Auto Caravans No.	Auto Caravans No. Cars	Auto Caravans Attendance	Lectures No.	Lectures Attendance	Special Parties No.	Special Parties Attendance	Museum Attendance	Miscel. Contacts No.	Totals Contacts Made	Publications Distributed No.	Publications Distributed $ Sales
Canyon	6	78				13	6933				5498	12,509		
Fishing Bridge	2	[illegible]	4	15	46	7	632			4314		5,050		$ 87.75
Madison						1	11			1 40	167	1,218		
Mammoth	2	55	7	55	194	7	[illegible]			**200 5571		6,138		51.65
Mount Washburn											2472	2,472		
Norris										4489		4,489		
Old Faithful	13	1029	10	321	1099	13	3625	1	8	19167	*20730 371	46,029		197.65
West Thumb														
Totals 1936	24	1200	21	391	1329	41	11529	1	8	34581	29238	77,885		337.05
Totals 1935	78	2587	27	254	816	93	15718	7	616	26714	8444	54,695		$ 417.55

West Thumb closed, August 31
Madison Museum closed Sept. 2
Norris Museum, Sept. 8
Canyon closed, Sept. 13
Fishing Bridge, Sept. 13
Mammoth, September 13
Mt. Washburn, September 13
Old Faithful, September 13

Park Visitors During Period: 30,870

Signed: Dmax Bauer
Park Naturalist

Misc.: Mt. Washburn
*Old Faithful Cone Talks
Artist Point
Inspiration Point
Grand View
Museum, Nature, and Bus Talks

SUMMARY OF NATURALIST ACTIVITIES

For ~~xxxxx~~ ending September 15, 1936
season

Yellowstone National Park

Place	Field Trips No.	Field Trips Attendance	Auto Caravans No.	Auto Caravans No. Cars	Auto Caravans Attendance	Lectures No.	Lectures Attendance	Special Parties No.	Special Parties Attendance	Museum Attendance	Miscel. Contacts No.	Totals Contacts Made	Publications Distributed No.	Publications Distributed $ Sales
Canyon	140	3132	69	1568	5582	143	101587	16	731		126915	239,947		
Fishing Bridge	76	2035	75	572	2102	83	34677	4	45	82528	6028	127,435		$ 1578.75
Madison						70	3459			60791	13119	77,369		
Mammoth	159	8836	128	2755	10113	84	13037	6	179	129394	3394	166,973		1629.35
Mount Washburn											35375	35,375		
Norris	86	3861						17	810	66506	30498	101,675		
Old Faithful	162	23857	87	7158	24180	90	67709	28	2952	220578	*343610 9514	692,400		$ 4168.00
West Thumb	216	14369				74	11123					25,492		
Totals 1936	848	58110	359	12053	41977	544	233612	71	4717	559797	568453	1,466,666		$ 7376.40
Totals 1935	1159	69956	250	5910	19814	1003	311756	120	9373	406930	164735	922,564		$ 6976.85

Closing Dates:
West Thumb, August 31
Madison, September 2
Norris, September 8
Canyon, September 13
Fishing Bridge, September 13
Mammoth, September 13 (250 visitors on Sept. 14 and 15 included above)
Mt. Washburn, September 13
Old Faithful, September 13.

Park Visitors During Period: 377,358

Signed: Oscar Bauer
Park Naturalist

*OLD FAITHFUL CONE TALKS
Museum Attendance and Cone Talks were recorded at Old Faithful throughout the month of September

POST SEASON CONTACTS FROM
SEPTEMBER 14 to 30, 1936

SUMMARY OF NATURALIST ACTIVITIES

~~week~~
~~For month ending~~ _____, ~~193~~
~~season~~

Yellowstone National Park

Place	Field Trips		Auto Caravans			Lectures		Special Parties		Museum	Miscel. Contacts	Totals	Publications Distributed	
	No.	Attendance	No.	No. Cars	Attendance	No.	Attendance	No.	Attendance	Attendance	No.	Contacts Made	No.	$ Sales
Canyon														
Fishing Bridge														
Madison														
Mammoth														
Mount Washburn														
Norris														
Old Faithful										4007	*7097	11,104		
West Thumb														
Totals 193										4007	7097	11,104		
Totals 193														

Park Visitors During Period: _____

Signed: E. Mae Bauer
Park Naturalist

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

YELLOWSTONE NATIONAL PARK

YELLOWSTONE PARK, WYO.

OFFICE OF THE SUPERINTENDENT

REPORT OF THE NATURALIST DEPARTMENT
FOR
OCTOBER, 1936

I. CURRENT OPERATIONS

A. PUBLIC CONTACT

Visitors:

Oct. 3-5 - Rev. and Mrs. Hintz, Casper, Wyoming.
Oct. 3-5 - Mr. and Mrs. William Stone, Casper, Wyoming.
Oct. 3-5 - Mr. Ralph Childs, Chief Scout Executive, State of Wyoming, Casper, Wyoming.
Oct. 7 - Mr. Frost, SCS Preparator from the Berkeley Office, Berkeley, California.
Oct. 12-14 - Mr. Adolph Murie, SCS Wildlife Technician, Omaha, Nebraska.
Oct. 14 - Mr. Charles A. Brill, Chief of Division of Mails and Files, National Park Service, Washington, D. C.
Oct. 14 - Mr. Maloney, SCS File Expert.
Oct. 16 - Mr. and Mrs. McGiffins, recreational leaders of southern California.
Oct. 20 - Mr. Edward M. Groth, U.S. Consul from Calcutta, India.
Oct. 20 - Mr. DuToit from Capetown, South Africa.
Oct. 24-26 - Mr. Walter Fian, Acting Chief Ranger, Rocky Mountain National Park.

Lectures:

No lectures were given by the Naturalist Staff during the month of October.

B. RANGER NATURALISTS

No ranger naturalists were employed during the month.

II. PERMANENT PROJECTS

A. ADMINISTRATION

Park Naturalist Bauer was engaged in a reconnaissance examination of an area in southern Utah adjoining Zion National Park at the request of the Secretary of the Interior. He returned to Yellowstone Park on the evening of October 6. The supervision of the Naturalist work was carried on by him throughout

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the remainder of the month. Frequent conferences were had with Mr. Crowe and Mr. Kearns on the closing of museums and the preparation of plans for the winter months. About twelve days were spent in completing the bulletin on "Place Names of Yellowstone Park" and beginning a paper on "The Geysers of Yellowstone", which will be a popular account. Some editorial work was done on Nature Notes, which were completed and mailed October 15. The meeting of the Board of Directors of the Yellowstone Library and Museum Association was held on Friday afternoon, October 25, and the report of the Executive Secretary on the progress for the last year was prepared and read at this meeting.

Assistant Naturalist George Crowe spent most of his time in taking care of materials charged out to the various museums and in closing the museums in preparation for the winter; also in taking care of the bedding and other furniture in the ranger naturalists' quarters, storing of tents and other materials. Mr. Crowe took sick on Wednesday, October 21, and was taken to the Hospital in Livingston by Mr. Kearns that evening. On the 22nd he was operated on for what appeared to be appendicitis, but it was found to be cancer of the colon. He seemed to recover fairly well from the operation but on Sunday, October 25, a decline set in and he died Tuesday, October 27, at 6:15 P.M.

Junior Naturalist Kearns did most of the preparation work on Nature Notes for the September-October issue, made the drawings for the cover and the remainder of the edition and cut the stencils for the same, also helped in assembling and stapling this edition. He made numerous field trips, taking Mr. Frost, NCW Preparator from the Berkley Office, around the Main Loop, obtaining pictures and observations of Norris and on one day accompanying Sanford Hill to the Old Faithful area and return. He also took care of a large number of routine matters including the handling of publications accounts and correspondence for the Yellowstone Library and Museum Association. The direct supervision of the CCC enrollees was taken over by Mr. Kearns on October 25.

Miss Catharine Harris, permanent clerk-stenographer, carried on the regular duties of the position throughout the month.

B. NATURE NOTES

The September-October issue of Nature Notes contained articles on animal and bird life and was completed and mailed on October 15. Circulation was approximately eight hundred.

C. LIBRARY

Books in circulation	40
Books received during October	1
Magazines and pamphlets in circulation	19
Magazines received during October	25
Pamphlets received during October	39

D. [illegible]

The Park Naturalist discussed with Resident Architect Sanford Hill plans for the new Mammoth Museum and furnished the Berkeley Office with figures on the capacity needed for this museum.

E. [illegible]

No new equipment was received during the month of October.

F. [illegible]

Negatives received during October	600
Negatives in use during October	87
Prints received during October	600

G. LANTERN SLIDES

One hundred two colored lantern slides prepared by Mr. Haynes through the summer and part of them received late in the summer and the remainder this month have been added to our list of slides but have not been accessioned yet.

H. PUBLICITY CLIPPINGS

Clippings classified and filed in October.....181

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I. THERMAL ACTIVITY

Mammoth Hot Springs by Junior Naturalist Kearns

Angel Spring - There are now five active vents from which water is flowing on the terraces comprising Angel Spring. The one as reported for September on the south end of the terrace continues to show an increase in amount of water flowing, while the opening to the west continues with a strong flow. Two new vents are active on the old part of the terrace to the east and should these continue, Angel Terrace may again be active over the high formation to the east.

Baby Spring - The main flow from this spring is now to the southeast and east while the area which was most active to the west last month shows a marked decline.

Blue Spring - Slightly less in amount of flow than last month with a marked decrease to the north while the overflow over Jupiter Terrace to the east again shows a fair amount of flow.

Cleopatra Spring has fallen off decidedly and has continued to decline during the last three weeks.

Cupid Spring once again shows a marked increase in flow with water issuing from the new vents on the top of the terrace to the north and west. The coloration of this spring is particularly beautiful at this time.

Hymen Spring continues inactive.

Jupiter Terrace - The flow over this terrace is about the same as in September with water being discharged over three areas with but one of them showing any decided color.

Main Spring is again flowing at the east end but with a relatively small amount of water in evidence.

Minerva Spring continues active with two pools on top full and overflowing into cracks to the west and east.

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Mound Spring - The flow from Mound Spring to the north is about the same as reported for last month while there is a marked increase in the flow on top to the west and south. This top flow is not visible from the highway and is beautifully colored with orange and varied shades of brown predominating.

Naiad Spring has decreased slightly in flow with water coming from one small main vent.

Opal Spring has resumed considerable activity and again is flowing with a fairly strong flow and marked coloration.

Orange Spring Mound is flowing to the northwest with a small stream of water from a vent located well near the top of the mound. The small vent to the east is quite active.

Palette Spring - Although the overflow is still to the west of the Devils Thumb, it is concentrated and rather than spreading out in a thin veneer over the entire area of the spring it is running a sizable volume of water down over the lower edge of the now inactive Hymen Terrace.

Summit Basin Spring - This dramatic spring has again decreased to such a marked extent that there is water in the pool to the north and none in the pool to the south. However, there is a strong flow of water running into the larger pool to the north but the water level is at least six feet below what it has been over the past months. This flow is going into a crack which has developed around the entire base of the north vent, evidencing a settling of that area.

A New Spring - A new spring has broken out on the southwest part of Main Terrace at a point southeast of Cupid Cave and southwest from Blue Spring. This spring was discovered by former Assistant Naturalist Crowe on October 16. The flow, which was strong from the very first, has increased steadily until a sizable stream is flowing to the northeast into the Blue Spring basins and thence on over the southernmost part of Jupiter Terrace. Three new vents have developed since the spring was first discovered on October 16 and although not as large as the original vent, they are discharging a sizable volume of water. The coloration of this spring is particularly beautiful with long delicately tinted streamers of travertine being rapidly deposited.

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J. PERSONNEL

Park Naturalist Bauer was on duty all month.

Assistant Naturalist Crowe was on duty until the close of October 21.

Junior Naturalist Kearns was on duty all month except annual leave one-half day on October 8 and one-half day on October 10.

Clerk-stenographer Miss Harris was on duty all month except one day of annual leave.

CCC enrollees: Lewis Yaversnik was on duty all month and Jim Williamson reported for museum work on the morning of October 12 and continued throughout the month.

Respectfully submitted,

C. Max Bauer
Park Naturalist

CMB:ch
cc Director
~~Russell~~ ✓ file
Hall
Bumpus
Museum

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"Fishes of Yellowstone" and it is hoped by this [illegible] that he will have a paper ready for publication which will include all the game and forage fishes of the Park region. [illegible] Naturalist Miner is preparing a paper on the "Glaciation of the Mammoth Region and the Gardiner River Valley" for publication in the bulletin of the Geological Society of America. [illegible] paper will add greatly to our knowledge of the glacial history of Yellowstone.

Junior Naturalist Kearns made several [illegible] lectures of trees in summer and winter [illegible] animals and birds. Mr. Kearns also [illegible] reliance in their filing of negatives [illegible] work in the museum. During the month [illegible] of the basement which includes the work room [illegible] large amount of material that had accumulated through [illegible] several years, thus removing fire hazard and making [illegible] more suitable for regular work. Three days [illegible] checking old files for historical material, two [illegible] labels and lecture notices and several [illegible] rary books. Only a moderate amount of correspondence [illegible] ried on during the month and this was about evenly divided between the Junior Naturalist and the Park Naturalist.

Miss Catharine Harris, [illegible] Clerk-[illegible] ried on the regular duties of the [illegible] and [illegible] considerable work in the library in revising [illegible] list, straightening out files of bulletins [illegible] This month the daily bulletin of activities [illegible] Harris has taken over the duty of preparing [illegible] grouping for all the departments will be [illegible] winter by Miss Harris.

B. Nature Notes

Miss Harris revised the [illegible] of addresses.

C. Library

Books in circulation..... [illegible]
Books received during November..... [illegible]
Magazines and pamphlets in circulation..... 4

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[illegible] continues with a strong flow and beautiful [illegible].

[illegible] Spring Mound - The discharge is about the same [illegible] October but the activity has veered around to the west with a small trickle down the mound to the south. The small vent to the east continues quite active.

Palette Spring - A strong overflow continues to the west of the Devils Plumb and is building up many tiny terraces where the overflow crosses the area to the north and east of [illegible] Spring.

Summit Basin Spring - Continuing the lead as the most [illegible] tic spring on the Terraces, the Summit Basin Spring has [illegible] back from a very low level at the end of October to a size [illegible] beauty equalling its most pronounced activity of the past [illegible].

A New Spring - First discovered on October [illegible], [illegible] steadily increases in amount of water discharged and in beauty of coloration. It is located to the southeast of Cupid Spring and southwest of Blue Spring. It is possible [illegible] increasing activity of this spring is affecting Blue [illegible].

Another spring which has been active for the past three years, varying in quantity of flow from time to time, is now flowing a considerable amount of water. It is located to the east of the old Painted Pool Spring and at the northwest end of the ridge north of The White Elephant. This spring is on the trail between the Devils Kitchen and the White Elephant. The water is quite warm and the algae in it are thriving and beautifully [illegible].

Upper Geyser Basin
reported by
[illegible]

Beehive Geyser was observed in eruption by Mr. [illegible] on November 1[illegible] and by others on November 17 and 2[illegible].

Giant Geyser erupted three times during November.

-[illegible]-

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[illegible] Faithful Geyser - [illegible] people [illegible] oriented viewing the eruptions of this world-famous geyser. In addition to locals, there were cars from North Dakota, Iowa, and California.

On November 20 the [illegible] [illegible] the following geysers were [illegible] to take on [illegible] date: Paleidoscope and [illegible] [illegible] [illegible], Mary, Castle, [illegible], and [illegible]. [illegible] [illegible] the Sentinels in the [illegible] [illegible], [illegible] [illegible] [illegible]

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was on leave the remainder [illegible]. Miss Harris has spent considerable time during [illegible] file system for the library and will soon [illegible] this work current. [illegible] departments being [illegible] with employees [illegible] on leave, Miss Harris has [illegible] the mimeograph [illegible] for all departments.

B. Nature Notes

The November-December issue of [illegible] mimeographed and mailed the early part of [illegible], a total of [illegible] copies being printed and [illegible] copies [illegible] mailed.

C. Library

Books in circulation.....	44
Books received during December.....	[illegible]
Magazines and pamphlets in circulation.....	19
Magazines received during December.....	[illegible]
Pamphlets received during December.....	[illegible]

D. Museum

Tentative plans are in process for additional geologic exhibits for the Mammoth Museum which it is hoped will be installed by the opening of the 1937 tourist season.

E. Equipment

A new section was received for the file cabinet in the Naturalist Office. Several items were also received for use with the mimeograph and mimeoscope.

F. Photographs

Negatives received and filed during December....	[illegible]
Negatives in use during December.....	77
Prints received and filed during December.....	617

G. Lantern Slides

Eighty lantern slides were used for the [illegible] mouth during the month. In addition to the [illegible]

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